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An Address
ON
AMPUTATIONS AT THE HIP AND SHOULDER
(INCLUDING INTERSCAPULO-THORACIC), AND ADVOCATING THE PRELIMINARY LIGATURE OF MAIN VESSELS IN OTHER AMPUTATIONS.

Delivered before the Northumberland and Durham Medical Society on March 10th, 1910,

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MR. PRESIDENT AND GENTLEMEN,—I propose to put before you some amputations at the hip and shoulder. This series of major amputations has impressed me with the extreme importance of avoiding hæmorrhage. Hæmorrhage and shock are almost synonymous terms. The chief step in preventing hæmorrhage during amputation at the hip and shoulder has been the preliminary ligature of the great vessels. I shall conclude by advocating the extension of this step to amputations elsewhere, more especially to those of the arm and thigh.

I am emboldened to speak about amputations because I have observed how little attention the subject has of late received. Nevertheless, it seems reasonable to suppose that the last word has not yet been said upon this important branch of surgery. I wonder whether all surgeons feel quite so keenly a disaster after a major amputation as they would one from septic peritonitis after laparotomy. But amputations have often to be performed upon patients who are gravely and critically ill, and I am convinced that more of these would recover if every drop of blood were saved during the operation.

In referring to the cases I do not propose to enter into minute details. The first step has always been to ligature and divide the main artery; the second to elevate the limb to economise its blood[1] and then to secure the great vein; and the third to amputate the limb in a methodical and leisurely manner. The flaps are fashioned of skin and muscle, using a small knife for the purpose. The shape of the flaps and the position of the incision are determined by the conditions at the time of amputation. Muscles infected with sarcoma have been, as far as possible, divided at or near their attachments. If necessary a separate vertical incision has been made to ligature the main vessels. It is a matter of little moment whether this be done or whether the amputation incision be used for that purpose. Three cases of interscapulo-thoracic amputation will be given first.[2]

INTERSCAPULO-THORACIC AMPUTATION.

The following case, which culminated in interscapulo-thoracic amputation, is full of instruction. It shows the hopelessness of inadequate operations for malignant disease, and also how cautious we should be in making a clinical diagnosis.

CASE 1.—The patient was a thin woman, aged 48. Two years before I first saw her an operation had been done for the removal of the right breast for carcinoma. The mammary gland had been taken away and some of the pectoral and lower axillary glands. The same surgeon did two more operations for removal of axillary glands, but without removing the pectoral muscles. As might have been expected after such inadequate attempts, the cancer continued to grow in the axillary glands. These required removal, but in the meantime another complication had arisen. A tumour had grown in the left breast. Taking its clinical characters and the history into consideration, most would have assumed that this was a carcinoma. On July 19th, 1904, it was incised. Competent observers pronounced it to be a carcinoma, but the immediate microscopical sections were those of excised chronic mastitis with cysts. So that after this had been removed the growth in the right axilla was taken in hand. After the pectoral muscles had been removed a number of carcinomatous glands were found reaching nearly to the clavicle. To get these away the axillary vein had to be tied and a portion of it excised. Great difficulty was experienced in removing some growth along the subscapular artery and its branches, although a part of the latissimus dorsi was taken away in the attempt. But in the end I could not help feeling doubtful whether I had got away a prolongation which ran backwards above and below the long head of the triceps. I made up my mind that should recurrence take place nothing short of interscapulo-thoracic amputation would afford any reasonable chance of safety. Rather a heavy price to pay for the first inadequate operation. Recovery was uneventful with the exception of some temporary loss of power and swelling of the right arm.

Four months later (Nov. 8th, 1904) the patient returned, and it was thought that there was some enlargement of the glands in the neck, so I exposed the posterior triangle by the usual incision; but, in spite of a prolonged search, I could find no enlarged lymphatic glands. From my experience of other cases I believe this delusion was caused by the posterior belly of the omohyoid muscle, which contracts when it is touched, and in thin people feels like a small lump. For another year (until Nov. 21st, 1905) everything seems to have gone well. Then the arm became very painful, œdematous, and nearly useless. There was a quantity of hard scar in the axilla. On Nov. 21st, 1905, some of this was removed and consisted of fibrous tissue with scattered groups of cancer cells. Recalling my former operation, at which the backward growth of cancer was found, I proceeded to perform interscapulo-thoracic amputation. The pectoral muscles had already been removed and no axillary vein was met with. After the clavicle had been divided the subclavian artery was tied and the arm slowly and quietly removed, every bleeding point being immediately secured. The division of the brachial plexus caused no shock. The operation took about one and a half hours, very little blood having been lost. It was followed by a moderate amount of shock and the patient rapidly recovered, the wound having healed by first intention.

The interscapulo-thoracic amputation was justified by what was afterwards found. Carcinoma had grown along the axillary border of the scapula and into the subscapular and infraspinous fossæ. Cancer cells were also seen in the cords of the brachial plexus. This probably accounted for the severe pain.

But this was not the end of this unfortunate patient's sufferings. On May 8th, 1906, nearly two years after my original operation, I performed a seventh operation and removed under gas a small nodule of spheroidal-celled carcinoma from the left side of the chest wall. It may be remembered that previously a part of the left breast had been excised for chronic mastitis with cysts. There is no record of this woman's death at Somerset House, so that she may yet live.

The second case of interscapulo-thoracic amputation illustrates the extreme malignancy of chondro-sarcomata; also, how the wound may be infected by the air—usually a danger during such a long operation and with such a big open wound.

CASE 2.—On July 20th, 1909, an attempt was made to remove an ossifying chondro-sarcoma springing from the neck of the scapula at the base of the coracoid process. The patient was a man, aged 64 years. Although the growth had a stalk, yet it infiltrated the neck of the scapula near the base of the coracoid process, and it was doubtful whether some of it had not been left behind. Interscapulo-thoracic amputation afforded the only possibility of removal. That was done on July 31st. The incision which had been made in the attempt to remove the tumour was enlarged—much blood had been effused. After a quantity of clot had been turned out the clavicle was sawn through and the subclavian artery and vein tied and divided. The blood effusion made this step difficult. Clearly it would have been better that the growth had not been touched. The amputation was completed in the usual way. Bleeding from the small vessels was stopped at once and there was very little loss of blood. Again there was no obvious shock when the brachial plexus was divided. A large drain was left in the lower end of the wound. The shock afterwards does not seem to have been severe; the temperature fell from 98·8° F. to 98° F., the

[1] See also A. Webb Jones, THE LANCET, April 24th, 1909, p. 1208.

[2] I am greatly indebted to my house surgeon, Mr. P. T. Spencer-Phillips, for the trouble he has taken in supplying me with the notes of the hospital cases.

pulse being 84 and respirations 20, nor was reaction marked, for the temperature merely rose to 99° F. and the pulse and respirations remained the same.

The wound became infected and a severe illness ensued, followed by rather slow recovery. The infection was bacillus aerogenes encapsulatus. When such a calamity takes place we always have a searching inquiry made, and I am indebted to Dr. M. H. Gordon for the trouble he took in investigating the source of infection. A film taken from the wound as soon as infection was suspected was crowded with a large Gram-positive bacillus with a capsule. A guinea-pig injected with some of the exudation died in 24 hours from emphysematous gangrene and its fluids were full of the same bacillus, which grew anaerobically on agar and in milk. It corresponded to the bacillus aerogenes capsulatus of Welch, and also gave the characteristic change in milk known as Klein's enteritidis change, so that the kind of infection is not in doubt. Dr. Gordon ascertained whence it came. He says that having previously recovered this micro-organism from the open air, from the dust of rooms, from dirt deposited by boots, and from fæcal matter, it was thought probable that the wound had been infected from air at the time of operation, which took at least one and a half hours. So the next time I operated in that theatre Dr. Gordon exposed plates for two hours all round the theatre and obtained the same bacillus from a plate between the operating table and the door. Smoke experiments showed that a current of air passed from the door over the table to a fan, and that this current of air drew with it dust deposited by people's boots on the outside landing. The uses of adversity are sweet. Steps have been taken so that in future this source of contamination may be avoided.

Thanks to Mr. John Adams and Dr. Hubert Chambers I have learnt the after-history of this patient. Dr. Chambers informs me that he died in December, about five months after the original operation, from pleuritic effusion on the right side, the original tumour having been on the left. Dr. Chambers had no doubt but that this was due to a secondary growth, for he aspirated twice and removed blood-stained serum. He could not detect any recurrence in the scar or glands.

CASE 3.—Interscapulo-thoracic amputation was also performed on April 12th upon a man, aged 25 years, who had a large sarcoma of the scapula, filling the supra- and infra-spinous fossæ, and complicated by growth in the glands of the axilla and the posterior triangle of the neck. It is said that a swelling had been noticed for less than six weeks; stiffness and pain seem to have been the leading symptoms. As it was obvious that the man would speedily die if left alone, I thought it right, after consultation with my colleagues, to attempt to prolong his existence. The anterior incision was begun almost at the top of the posterior triangle of the neck, and after the external jugular vein had been tied and the clavicle sawn through, the subclavian vessels were tied and the limb removed, together with the enlarged lymphatic glands. Some of these reached inwards so far that part of the sterno-mastoid muscle had to be divided before they could be removed. This formidable operation lasted 1 hour 55 minutes; the shock was more than usual, but was easily and quickly overcome by injections of strychnine and the administration of a pint of saline solution with brandy in it. The patient made rapid recovery; his evening temperature was 99° F. for several days, and the quickest pulse-rate 100 on the third day. It is to be doubted whether reaction would have been so speedy and the improvement so lasting had his blood not been economised. Within a fortnight all the stitches had been removed, the wound having healed except a very small piece in the centre, which speedily closed. This man went to our convalescent home, but I regret to say the growth soon returned, and he died about two months afterwards. We had to deal with one of the most malignant types of sarcoma, for the pathological report says that the growth was soft and consisted of large round cells.

Glancing over these three cases of interscapulo-thoracic amputation I cannot help being struck by the moderate amount of shock—on no occasion did it give rise to serious anxiety—and next by the quick recovery. Even the case of serious sepsis was able during the height of his illness to sit up in bed, and although we felt apprehensive we always expected him to get well. To my mind the small amount of shock and the quick recovery were almost entirely due to Berger's admirable foresight. He knew that to attain success hæmorrhage must be prevented by the preliminary ligature of the great vessels. It was not necessary to carry out Kocher's suggestion and try to tie the small transverse cervical and suprascapular arteries.

Next in importance comes the systematic division of muscles one by one, each vessel being secured, if possible, before division, but certainly the moment it begins to bleed. Not only does the prevention of hæmorrhage in these ways tend to minimise shock, but it also leaves the patient in infinitely better condition to make a speedy convalescence and to combat any complication which may ensue.

Although I especially inquired of my friend and colleague Mr. Richard Gill, who gave the anæsthetics, he was of opinion that there was no shock when the cords of the brachial plexus were divided.

In the next place we should note the rapidity with which the sarcomata grew and carried off the patients. In the instance of round-celled sarcoma of the scapula, which was of the most malignant nature, there was no occasion for surprise, but in the other of chondro-sarcoma of the scapula there was every reason to hope that the operation had extirpated the disease. But this and other instances have convinced me that a chondro-sarcoma is a far more malignant disease than is usually thought; that it is likely to recur at the place whence it had been removed, and to invade other parts of the body. We know the swiftness with which cancer invades the lymphatic system. My experience tells me that a rapidly growing sarcoma invades the lymphatic system almost as quickly, and the vascular system much more quickly—very strong reasons why every tumour should be at once exposed, microscopically examined, and surgically dealt with.

AMPUTATION AT THE HIP-JOINT.

I now propose to refer briefly to the cases of amputation at the hip-joint.

In recent works on operative surgery I cannot see that the principles which are so admirably fulfilled in Berger's operation have been systematically applied to amputation at the hip, otherwise we should not have to read accounts of ingenious, and in my opinion unnecessary, devices for the prevention of hæmorrhage. Amongst these various devices are steel pins for transfixion, steel rods, clamps, hæmostatic forceps, Esmarch's tourniquet, rubber tourniquet with transfixion steel pins to prevent it from slipping, a rubber tube pushed through the limb, and so forth. Such a multiplicity of devices is a sure indication that all is not well. In the following eight cases of amputation of the hip-joint the principles which govern Berger's operation have been carried out.

The operation has been begun by ligaturing the main vessels after emptying the limb of blood by holding it up. Then the flaps have been fashioned and the muscles cut through one by one, and each vessel secured either before division or the moment afterwards. In spite of the grave condition of some of the patients at the time of operation, and in spite of the formidable growths for which some of the operations were performed, all recovered from the operation, and in some the recovery was rapid. In a few instances not only was amputation done at the hip, but malignant glands were taken away from the iliac fossa or pelvic brim.

Even an enchondroma is not so innocent as is sometimes thought.

CASE 4.—A man, aged 47 years, had a hard oval swelling 4½ inches by 3 inches fixed to the left femur below and in front of the great trochanter. It was thought that this had been growing for a year. It was an ossifying enchondroma, and was removed by chiselling through its bony pedicle. The body of the tumour consisted of cartilage undergoing mucoid degeneration. Six years later (Feb. 13th, 1906) he was readmitted. A tumour had slowly grown at the site of the old operation. It was sufficiently large to prevent full flexion of the left hip-joint. The inguinal glands were large on both sides, but the left were by far the largest.

On Feb. 24th I performed an amputation at the left hip-joint. The incision was begun over the common femoral artery, which was tied and divided, also the common femoral vein, then all the lymphatic glands were removed from Scarpa's triangle and immediately examined. Those upon the top of the tumour had growth in them, but not those near the femoral canal. Amputation at the hip-joint was

then completed in the usual way, the muscles being cut one by one and every small vessel secured immediately. My note says that there was very little bleeding. The shock following the removal of the lower limb at the hip-joint of a muscular man aged 47 years was by no means excessive. The temperature fell to 96° F., and the pulse rose to 112 and the respirations 28. A speedy convalescence ensued. There was slight necrosis of the edge of the flaps, but this caused but little delay in the healing.

The pathologist reports that the tumour was a chondroma and with no evidence of sarcoma in it. But however this may be, it is to be noted that the tumour had grown again after a bony stalk had been cut through, and that it had invaded the neighbouring lymphatic glands. This patient is known to have been well (Nov. 28th, 1908) one year and nine months afterwards.

CASE 5.—Amputation at the hip-joint was performed upon a woman aged 39 years. She had a huge growth in the upper part of the right thigh, and enlarged lymphatic glands in Scarpa's triangle and in the iliac fossæ. Thus the operation consisted of two parts: first, the removal of the lymphatic glands; and secondly, of the limb. The growth is said to have been of six years' duration, and probably began in the soft parts.

On Nov. 23rd, 1906, an incision was made over the common femoral vessels, which were ligatured after the lymphatic glands had been removed. The iliac fossa was then exposed and several enlarged lymphatic glands removed from it. Although these glands were so much enlarged they are said by the pathologist not to have contained any growth. In spite of this I suspect that they would have continued to grow. The amputation was completed in the usual way and with hardly any hæmorrhage. The shock was comparatively slight, the temperature fell to 97·4° F., the pulse remained at 80 and the respirations at 28. My note says that the shock was about the same as might have been expected after the complete amputation of the breast with removal of the pectoral muscles. The wound healed by first intention. The amputation was performed on Nov. 23rd, 1906. The patient died from a growth in the thorax on June 8th, 1907. Six years is a long interval between the discovery of a tumour and its removal.

CASE 6.—Amputation through the hip-joint was performed upon a girl, aged 18 years, for a recurrent sarcoma of the femur. Six months before Mr. Butlin had amputated through the middle of the thigh for a tumour which the pathologist reported to be "a periosteal cystic sarcoma—mixed celled, with giant cell systems." On April 13th, 1897, amputation through the hip-joint was begun by an incision over the common femoral vessels, but a high division was found, so that the superficial femoral artery and vein were first tied and afterwards the deep femoral artery and vein. This anatomical peculiarity was easily recognised and gave rise to no difficulty. The remainder of the limb was then removed by lateral flaps and the wound was drained. Although there was but little hæmorrhage the shock during the course of the operation was severe. From beginning to end of anæsthesia it took one hour. There was great shock on division of the great sciatic nerve, and the patient had two injections of strychnine whilst on the table and afterwards saline injections. During the shock her temperature fell to 97° F., and the pulse rose to 108 and the respirations 24. However, a few hours afterwards a satisfactory reaction had taken place. For the shock which sometimes ensues when the sciatic nerve is divided may be severe at the moment but is not of long duration. The shock caused by hæmorrhage does not soon disappear because the vascular system has to be replenished. Also we may note that the previous removal of the lower limb from the middle of the thigh made no difference in the shock. This wound became infected with colon bacillus, although I had taken care to keep the incision as far away as possible from the anus and pudenda. However, it ultimately healed well. About ten months later, on Feb. 24th, 1898, Mr. Butlin removed some sarcomatous glands from the neighbourhood of Poupart's ligament, and 11 months later the patient died from a recurrence in the lung, having survived less than two years.

CASE 7.—Amputation at the hip-joint was performed under similar circumstances upon a boy, aged 11 years, who had had a tumour at the lower end of the femur. On April 2nd, 1907, the knee was explored by my colleague Mr. G. E. Gask, who performed amputation through the middle of the thigh. The tumour was a periosteal sarcoma of the lower end of the femur. The patient made a rapid recovery, but shortly afterwards some enlargement was observed in the lymphatic glands in the groin, and the end of the stump seemed suspicious.

On May 14th, 1907, I explored the end of the stump and found mixed-celled sarcoma. Next, the common femoral vessels were tied and the enlarged inguinal glands removed—they are supposed only to have shown inflammatory changes, but I am very doubtful about the microscopical diagnosis of sarcomatous glands. I believe that they are often infected, although the pathologist cannot determine the fact. Amputation at the hip-joint was then completed with very little shock and consequent small loss of blood. The sciatic nerve had an unusually large bulb at its cut end. During the shock the temperature was 97° F. and the pulse 120; during the reaction the temperature rose to 99·4° and the pulse to 120. He left the hospital five weeks afterwards for a convalescent home. Whilst he was at the convalescent home he is said to have had severe pleurisy, and he returned to his own home, where he shortly afterwards died.

This is another instance of the malignancy of subperiosteal sarcoma. The swelling at the lower end of the femur had been noticed six weeks before Mr. Gask's operation—a slight limp drew attention to it, so there was no unreasonable delay in this case.

CASE 8.—Amputation of the hip was performed upon a female aged 32 years. Some of the clinical features were unusual. There was a fluctuating swelling at the upper and outer part of the right thigh, which was thought to be a hæmatoma, but in addition the lymphatic glands in Scarpa's triangle and in the iliac fossa were much enlarged. The tumour had been growing for three years. The tumour swayed a little, and the superficial femoral vessels lay behind its inner side. The tumour was exposed and after the escape of a quantity of dark blood, probably liquefied clot, a portion of the surrounding growth was removed and found to be sarcomatous. The anterior crural nerve ran through it and the superficial femoral artery and vein could not be separated from its inner and posterior surface, therefore a large anterior flap was made; all the lymphatic glands were removed from Scarpa's triangle and from the iliac fossa, after which the femoral vessels were ligatured and the limb removed, the muscles implicated in the growth being detached from the pelvis. Very little blood was lost and shock was moderate and satisfactory reaction speedily ensued. So that it is possible to add a pelvic operation to amputation of the hip.

I was guilty of an error of judgment in this case. The wound looked so dry and altogether satisfactory that instead of putting in a proper drainage-tube a small gauze drain was used. This proved quite inadequate, for a hæmatoma formed and became septic.

The operation was performed on June 27th, 1905; by Sept. 27th of that year a growth could be felt fixed to the right side of the pelvis, and on Oct. 31st, 1905, the patient died from sarcoma of the pelvis. It is to be noted that the growth had been allowed to grow for three years.

The next two cases of amputation at the hip make an excellent contrast—they were both performed upon patients who were desperately ill and emaciated, after prolonged suppuration in and about the hip-joint. In the first the hæmorrhage was slight and consequently the shock was moderate. In the second, owing doubtless to the prolonged inflammation around the hip, there was more bleeding than usual, although in no way an excessive amount.

CASE 9.—A man, aged 46 years, had suppuration in the left hip for three years. There was a large abscess on the upper and outer side of the thigh. A photograph showed erosion of the head and neck of the femur and partial dislocation. A vertical incision was begun well to the outer side and the anterior flap turned upwards and inwards. The common femoral vessels were then secured and divided and the amputation completed in the usual way. The note says that the shock was slight, the temperature fell to 96·4° F., the pulse became 116, and the respirations 26. As some of the acetabulum was bare at the time of amputation a sinus persisted and convalescence was slow, but the ultimate improvement in the patient's condition was remarkable.

CASE 10.—Ten years ago amputation at the hip was performed upon a boy by Furneaux-Jordan's method for suppurative arthritis of the hip. I began by tying the common femoral artery and vein through a separate vertical incision. There was some bleeding from a branch which sprang from the back of the vein and which was transfixed by the aneurysm needle. However, the bleeding was easily controlled by pressure forceps. The amputation was then completed in the usual manner. The hæmorrhage was smart when the circular cut was made and also during the removal of the upper end of the femur. The subsequent shock was severe.

This does not contrast favourably with the operations done by slow and methodical division of the muscles and immediate restraint of hæmorrhage. This patient ultimately recovered and did well.

CASE 11.—Amputation at the hip-joint was also performed for a youth aged 16 years. He, too, had suppuration in and around the right hip. He was very anæmic and emaciated, with a persistently elevated pulse and temperature. On Dec. 19th, 1908, an abscess was opened and some thick pus escaped and staphylococcus pyogenes aureus was cultivated from it. But slight improvement ensued, and on Jan. 25th the wound was reopened and a quantity of inflammatory tissue with cancellous bone in it was removed from about the back of the neck of the femur. After this he improved for a while, but the swelling remained, and then his temperature became continuously high, so on April 13th, 1909, the sinus was again reopened and drained but with no good result.

On June 22nd amputation was performed at the hip. As the case was septic the common femoral vessels were tied with chromic gut, a separate vertical cut being made for the purpose. Some enlarged glands were with difficulty removed. My note says that the external circumflex artery and its branches bled freely. Owing to the brawny condition of the tissues it was difficult to restrain this as quickly as usual. Perhaps I could have done so if I had provided myself with toothed pressure forceps. Great shock ensued; his temperature fell to 96° F., the pulse became 116, and the respirations 28. As might have been expected, the wound suppurated and on Dec. 2nd, 1909, the boy left for a convalescent home, markedly improved in every respect, but there was still a sinus.

This case had, to my mind, a singular feature about it. The tissue which was removed, and which was called inflammatory tissue with cancellous bone in it, looked like an ossifying sarcoma, and in spite of the suppuration I have never felt sure that this was not the case. A skiagram taken before the boy left the hospital showed a large shadow filling up the acetabular region, and the stump was enlarged and very hard.

Eight cases of amputations at the hip-joint have now been given, and fortunately all have recovered from this formidable operation. I have not met with that hæmorrhage from the obturator, gluteal, or sciatic vessels which some speak of. Vessels of any size can be seen and secured before they bleed.

AMPUTATION AT THE SHOULDER-JOINT.

Impressed by the lessening of shock and speedy reaction in most of these amputations at the scapula and at the hip, and which, in my opinion, was due to the care taken in preventing bleeding, one naturally extended the same principle to other amputations.

CASE 12.—On Jan. 21st, 1908, amputation at the shoulder-joint was performed upon a man, aged 56 years. In addition to a periosteal sarcoma in the lower half of the left humerus he had osteitis deformans with characteristic changes in his skull and long bones. It is probable that the tumour had been growing for 15 months and had attained a considerable size. A fresh section confirmed the clinical diagnosis. The amputation was performed at the shoulder-joint by a method which is practically the same as that of Spence, but as a preliminary an incision 6 inches long was begun over the tip of the coracoid process and carried through the tendon of the pectoralis major. This brought in view the axillary vessels, which were tied above and below and divided. Then the brachial plexus was cut though without additional shock, and the amputation was completed in a leisurely fashion, the vessels being secured either before division or the moment they were met with. There was very little bleeding and consequently slight shock. After the operation the temperature merely fell to 97° F., the pulse being 76. The wound healed by first intention and a rapid convalescence ensued.

I am informed that within a few months this patient died from a recurrence of the growth in the spine. It is much to be regretted that the tumour had not been explored months before. A frozen section would have cleared up every doubt.

CASE 13.—Amputation at the shoulder-joint was performed in the same way upon a woman, aged 23 years, a domestic servant, for a subperiosteal sarcoma of the upper end of the left humerus. The operation was performed on April 17th, 1900. The incision was begun at the tip of the coracoid process and carried down the arm. After division of some of the fibres of the deltoid the axillary artery was tied. Next some sarcomatous glands were dissected out of the axilla. Then the incision was carried outwards and backwards through the deltoid because the tumour had grown into its lower part. Owing to the size of the tumour a part of the acromion process had to be sawn through to enable me to open the shoulder-joint and disarticulate. The size of the tumour was such that it had grown up against the acromion process. My note says that in the course of this operation the patient might have lost 2 ounces of blood. During shock the temperature was from 97° to 98° F. and the pulse was 88. During the reaction the temperature rose to 99·6° and the pulse to 114—that was the highest temperature. The pulse rapidly fell. The wound healed by first intention and the patient was discharged before the end of the third week.

This patient died on August 9th, 1903, about three years and five months after the operation. Eighteen months before her death it is said that an operation was performed at Cardiff for an internal tumour, but afterwards she had, I am told, tumours all over her body.

CASE 14.—Amputation at the shoulder-joint was also performed on a woman, aged 65 years, on July 9th, 1909, for gangrene which had begun on June 13th. When the amputation was done the gangrene had almost reached the middle of the arm. When the artery was exposed it was thrombosed. There was very little shock—the temperature fell to 97° F., the pulse rose to 120, and the respirations to 32. The wound healed by first intention.

AMPUTATION THROUGH THE NECK OF THE HUMERUS.

The advantage of ligaturing the main artery was shown in the following case of amputation through the neck of the humerus.

CASE 15.—A man, aged 62 years, on Oct. 27th, 1908, had amputation performed through the surgical neck of the humerus. He had an epithelioma on the back of the wrist which had been growing for seven years, but more quickly during the last two. It had been ineffectually treated by X rays and by zinc ionisation. There was considerable enlargement of the supra-condyloid gland, also suspicious fulness along the brachial vessels. The axillary glands were a little enlarged.

The usual incision was made beginning at the tip of the coracoid process and carried down about 6 inches. The axillary glands were taken away but contained no growth. Next, the cords of the brachial plexus were cut short and the brachial artery and vein were tied and divided. It seemed wise to remove as much as possible of the lymphatics, many of which are so close to the nerve trunks. The arm was then removed at the surgical neck of the humerus. There was very little loss of blood and consequently little shock, the temperature merely falling to 97° F., the pulse being 76. During reaction the temperature rose to 100° and the pulse to 100. Slight necrosis of the skin edge of the flap, which was associated with the colon bacillus, delayed union. But he went to our convalescent home in less than a month (on Nov. 24th, 1908). This man died on Jan. 21st, 1910, the primary cause of his death having been certified to be bronchitis and the secondary morbus cordis.

In other amputations lower down the arm the main vessel is so easily controlled, even by the operator himself, that the previous ligature of the brachial vessels is not of great advantage. Nevertheless, I have of late begun by exposing and tying them. In the case of a child they were exposed, clamped, and tied, the ligature being put on afterwards.

AMPUTATIONS THROUGH THE THIGH.

To anyone in the habit of ligaturing the main vessels before amputating at the hip and shoulder it is but natural

to take a further step. I have never felt satisfied with what has hitherto been done to control hæmorrhage during amputations through the thigh. These have oftentimes to be done under desperate circumstances and when it is of the greatest importance to avoid loss of blood. Even a moderate loss of blood may extinguish the chances of one who is dying from diabetic gangrene. Those who are emaciated and weakened by long-continued tuberculous or septic arthritis of the knee are ill fitted to bear much loss of blood. If the immediate shock is overcome the reaction is tardy, and the exsanguined patient is not likely to make a speedy recovery or combat complications which may ensue.

The steps usually taken to control hæmorrhage during amputation through the thigh are not, to my mind, at all satisfactory. Am I singular in feeling distrustful of digital compression? Of digital compression of the subclavian artery Mr. F. F. Burghard says it "is an uncertain method at the best."[3] Once I failed to compress the external iliac artery and felt deeply humiliated by the failure. Compression was difficult because of some enlarged glands, and the fingers slipped when the limb was jerked up. More than once I have seen digital compression fail. Considerable loss of blood has invariably ensued. Others, too, seem distrustful of digital compression, otherwise we should not have had such a multiplicity of tourniquets. Those made of steel seem to have disappeared since the introduction of Esmarch's elastic band. But that has always seemed to me rather a crude, unsurgeonlike device. The wheal which it may make is unpleasant, and such pressure cannot always be good for the underlying artery and vein. May not thrombosis follow its use? Why should the skin flaps at times mysteriously die?

CASE 16.—A man, aged 66 years, had gangrene of the left foot. The anterior tibial artery could be felt pulsating, but a skiagram showed that it was calcified, and also the posterior tibial; the arteries generally were hard and tortuous. On March 9th a surgeon amputated through the upper third of the leg. An elastic tourniquet was put on just above the knee. By March 25th the flaps were gangrenous, with severe pain and septic absorption.

On March 26th I again amputated through the lower third of the thigh, the artery being exposed and tied forthwith. There was comparatively little shock. Owing to the infection of the cellular tissues of the thigh at the time of the operation the stump suppurated, but ultimately healed after further removals of femur. The patient left the hospital at the end of July with the wound healed.

The risks of amputating through the upper third of the leg when the vessels are calcareous are well known, but elastic pressure upon such vessels must be attended with danger, and it seems to me reasonable to suppose that in the instance just given that may have had something to do with the gangrene of the flaps. If the surgeon elects to amputate in the upper third of the leg when the arteries are known to be calcareous, it would, in my opinion, be wiser to plan the amputation so as to tie the tibial and peroneal vessels before completing the flaps, thus avoiding compression of the main artery and vein.

The troublesome and persistent arterial bleeding which takes place after the removal of the elastic band is one of its most objectionable features. This is mentioned in most recent works on surgery, but they do not suggest any practicable alternative.[4] The long-continued elastic pressure seems to paralyse all the small arteries, especially the muscular ones. So that of late, taught by my experience of amputation at the hip and shoulder, I have begun amputation through the thigh with an incision over the superficial femoral vessels, so as to be able to tie them at the level of the sawn end of the bone. Afterwards the flaps have been slowly made with a small knife, each small vessel being instantly clamped. The following are examples of advantages of this simple proceeding.

CASE 17.—On Oct. 10th, 1909, amputation was performed through the left thigh of a man, aged 56 years, for advanced tuberculous arthritis of the knee. The disease had been in progress for two years; the pain was very severe. The man was emaciated, and in addition to tubercle of the knee had tubercle of the right lung. An incision was made at the lower end of Hunter's canal and the femoral vessels were ligatured and divided as they entered the popliteal space. The amputation was then completed in the usual way, any bleeding point being at once secured. There was very little loss of blood and consequently little shock. The wound healed by first intention and the patient left the hospital 24 days after the operation.

The improvement in the patient's condition was very marked, and we all agreed that he did very much better than such cases usually do, and which I attribute to the avoidance of hæmorrhage during the operation.

Everyone, I am sure, dreads having to amputate the thigh in cases of diabetic gangrene, for that operation is attended by a very high rate of mortality. I doubt whether the following case of amputation through the thigh for diabetic gangrene would have recovered had it not been for the immediate ligature of the main vessels.

CASE 18.—The patient was 64 years of age and had 4 per cent. of sugar in the urine. For many weeks some of his toes had been gangrenous. Latterly the heel had become affected and the leg was threatened. Septic absorption was taking place, the temperature was usually well over 100° F., and the pulse at least 120. His lips and face were rather livid and at times he was drowsy—altogether a forbidding state of affairs.

The operation was begun with the patient lying comfortably upon his back. The vessels were exposed at their exit from Hunter's canal. The artery and vein adhered so closely that rather than spend time in separating them they were both included in a single silk ligature. Without moving the patient the amputation was completed in a leisurely manner, the muscles cut through with a small knife, and each bleeding vessel secured at once. Very little blood was lost and my friend Mr. Gill tells me that he noticed no shock. Owing to the diabetes and the condition of sepsis the patient remained gravely ill—the pulse sometimes ran up to 130 and was intermittent. Strychnine and strophanthus certainly improved the heart, but the greatest benefit was obtained from the continuous inhalation of oxygen. This was continued day and night for many days. The stump healed by first intention and the patient was able to return to his home about three weeks after his operation. The relief was, I fear, but temporary.

I cannot help contrasting this case with another of almost exactly the same kind which was operated upon by the methods which I have now discarded.

CASE 19.—The patient, a lady of mature years, suffered from diabetes and had 5 per cent. of sugar in the urine. One day she applied some strong acid to a corn, and gangrene of the foot ensued. An assistant undertook to control the artery with his fingers. The amputation was performed through the thigh. When the vessels were divided there was for a moment smart hæmorrhage which was speedily controlled. In other circumstances the loss of blood might not have mattered, but the patient is said never to have recovered from the shock, and died within 24 hours. How much better it would have been for the surgeon to have had the hæmorrhage entirely within his own control.

Although my experience of ligaturing the main vessels of the thigh before performing amputation is so small, yet the results have been so admirable that I shall now continue to do so, and I trust that others will follow my example.

[3] Loc. cit., p. 146.

[4] E.g., Burghard in a System of Operative Surgery, 1909, at p. 248 refers to the well-known persistent paralytic oozing after its removal.

MEDICAL SICKNESS AND ACCIDENT SOCIETY.—The usual monthly meeting of the executive committee of the Medical Sickness, Annuity, and Life Assurance Society was held at 429, Strand, London, W.C., on April 15th. There were present: Dr. F. de Havilland Hall (in the chair), Mr. J. Brindley James, Dr. F. C. Martley, Dr. J. W. Hunt, Mr. F. S. Edwards, Dr. Frederick S. Palmer, Dr. St. Clair B. Shadwell, Dr. F. J. Allan, Mr. J. F. Colyer, Dr. W. Knowsley Sibley, and Dr. J. B. Ball. The accounts presented show that the business of the society has been exceptionally good during the first three months of this year. The number of claims received has been less than usual, and with few exceptions they have been of short duration. The committee examined the draft of the report for the year 1909 to be presented to the members at the annual general meeting on May 19th next. A large increase is shown in the invested funds which now amount to nearly a quarter of a million sterling, while the sum paid away as sick benefit reached the record amount of £15,115, although the sickness experience was less than that expected and provided for in the tables. Prospectuses and all particulars may be obtained on application to Mr. F. Addiscott, secretary, Medical Sickness and Accident Society, 33, Chancery-lane, London, W.C.

FURTHER WORK ON THE PRESSOR BASES OF THE URINE.

BY WILLIAM BAIN, M.D. DURH., M.R.C.P. LOND.

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IN a paper published in THE LANCET last year [1] I showed that the urine contains certain bases which originate from putrefactive processes in the intestine. When injected into the blood stream they produce a marked rise of arterial blood pressure. Abelous previously had extracted from the urine a mixture of pressor bases, which he called "urohypertensine," but which he did not identify. I suggested that the retention of these bases in the body might be an important factor in raising the arterial pressure, and this view was supported by the examination of the urine of a few patients with increased blood pressure. In each of these cases the bases were either absent from the urine or present in greatly diminished quantity.

During the past few months I have continued the investigation, and examined in all 32 urines, but only the more interesting ones in the series will be alluded to in this paper; several urines were obtained from normal subjects and these served as a control. The result of this work has been to confirm my main conclusion in reference to cases of high blood pressure; I have also come across several new points of interest which demand fuller investigation in the future.

Methods.—In extracting these bases from the urine it is of paramount importance to obtain a trustworthy method. In my previous paper I described the original method of Abelous and several modifications of it. The simplest of these is what I spoke of as the "direct method"; without going into details again, this consists in extracting the urine with ether, and subsequently with amylic alcohol. One of the bases, which may safely be assumed to be iso-amylamine (a derivative of leucine) on the evidence previously adduced, is present in the ethereal extract. The amylic alcohol extract contains another base which is probably *p*-hydroxyphenylethylamine (a derivative of tyrosine), and which is the more active of the two in raising the blood pressure. There are probably other bases in the crude extracts (see later).

The disadvantage of the direct method is that in certain urines thick emulsions are formed when the urine is shaken with the extracting agents, and these are exceedingly difficult to separate satisfactorily. As the emulsions are probably due to the presence of colloid substances, it was hoped to remove them by treating the urine with certain substances which are known to adsorb colloids. The first of these which I tried was kaolin (4 per cent.); this did not entirely abolish the emulsion formation, although the emulsions were less dense than when the kaolin was omitted. The rises of blood pressure obtained after this method of treatment were not so marked as with the same urines treated by the direct method. It is thus evident that kaolin adsorbs not only most of the urinary colloids but some of the pressor bases as well.

Three varieties of charcoal were then obtained: (1) bone charcoal (Kahlbaum); (2) charcoal of unknown origin (Heller's); and (3) blood charcoal (Fleming's first quality). 4 per cent. of bone charcoal generally prevented the formation of emulsions without decolourising the urine completely, but, like kaolin, adsorbed a small portion of the bases. 2 per cent. of Heller's charcoal completely decolourised the urine, but did not prevent emulsions being formed. 4 per cent. of Fleming's blood charcoal both decolourised the urine and completely prevented the formation of emulsions. There was, however, no trace of the bases in the filtrate; they had been entirely removed by the charcoal. On Dr. O. Rosenheim's suggestion, the use of this charcoal, which at first sight seemed to defeat my main object, really afforded me the easiest method of obtaining the bases, for they can readily be extracted from the charcoal by boiling it with dilute hydrochloric acid. Not only is this charcoal method the easiest, but it is probably the most trustworthy.

In each experiment, as in those previously recorded, I worked with the same amount of urine—namely, 2½ litres. The charcoal is first vigorously shaken up with the urine for about 15 minutes and the mixture filtered. The filtrate ought to be colourless. The residue on the filter is then transferred to an evaporating basin and boiled with dilute hydrochloric acid and filtered. The filtrate containing the whole of the bases is made alkaline with sodium hydrate, and extracted with ether six times. It is then reacidified with hydrochloric acid, and having been made alkaline with powdered sodium carbonate is extracted with amylic alcohol twice. If the ethereal and amylic alcohol extracts are not quite clear they should be filtered, the latter through cotton-wool in a pressure filter. Both the extracts are then extracted with dilute hydrochloric acid. The hydrochloride solution is carefully concentrated in a small capsule on the water bath, and excess of the acid removed by leaving the capsule in a desiccator containing soda-lime. The residue is taken up with normal saline solution, and after neutralisation made up to 6 cubic centimetres. A specified portion of this (in most of my experiments 3 cubic centimetres) was injected intravascularly. The animals used for the experiments on blood pressure were cats, the injection being made into the external jugular vein; the arterial pressure from the carotid artery was registered in the usual way with a mercurial manometer. The animals were either anæsthetised with ether, or had been previously pithed under anæsthesia, and then kept alive by artificial respiration. I distinctly prefer the pithed animal as the effect upon blood pressure is much more marked than in those which are anæsthetised.

Influence of age.—Among the normal urines I examined a year ago was that of a boy aged 13 years, and I was surprised to find the almost complete absence of pressor bases; the amylic alcohol extract gave a faint rise of pressure, but the ethereal extract gave none whatever. I subsequently found the bases absent in the urine of another boy aged 14 years, and in the case of a lad aged 16 the rises were infinitesimal. The urine from a young man of 19 gave distinct rises with both extracts, but much smaller ones than were obtained from the urines of six normal adults varying in age from 26 to 54 years. This influence of age on the formation of pressor bases I intend to follow up more fully; the few experiments I have so far done certainly suggest that the absence of these bases from the urine of young people is one of the characteristics of this period of life.

Cases of high blood pressure.—I have had the opportunity of examining the urines of three cases of high blood pressure.

1. This was from a gentleman, 74 years of age, with a systolic blood pressure of 200 mm. Hg. The urine was of normal specific gravity and was free from albumin. Three years ago his pressure was 260 mm., but dieting brought it down. The ethereal extract produced no rise of blood pressure, and the amylic alcohol extract only a slight one.

2. This was from a lady, 50 years of age, with a systolic blood pressure of 180 mm. Hg. The urine was of normal specific gravity and was free from albumin. She was slightly gouty. The effect on blood pressure was practically the same as in the first case, and the experiment was done upon the same pithed cat.

3. This was urine obtained from one of Dr. F. W. Mott's patients; the blood pressure was "very high," but I have not the actual figure. The urine contained albumin. Both bases were entirely absent.

Cases of gout.—Here I have only two cases to record.

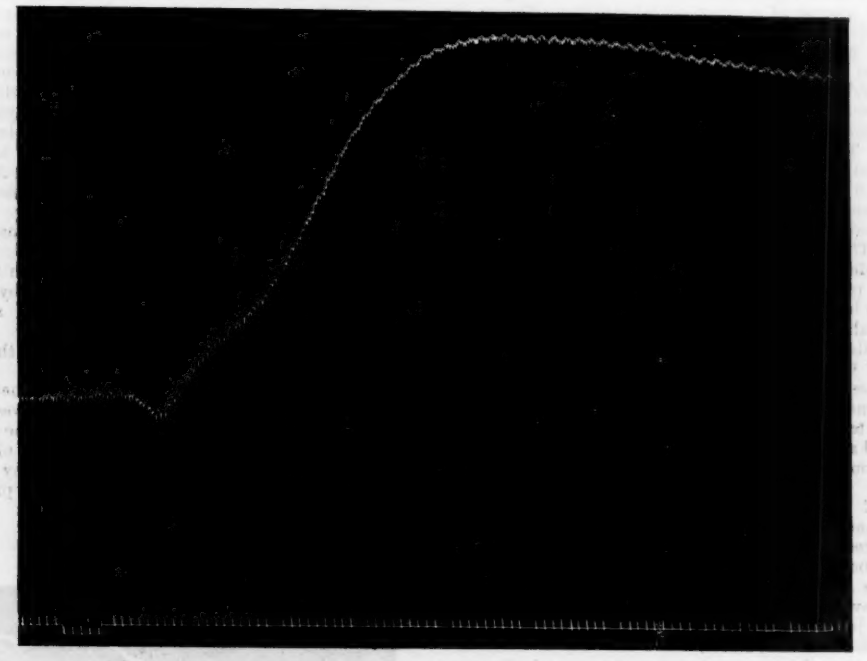
1. The patient was subject to repeated acute attacks of gout; the blood pressure was 135 mm. Hg. The experiment was performed upon the same animal as was used in the investigation of the urine of a normal adult with a blood pressure of 125 mm. Hg. The rises of pressure in the gout case were only about half those obtained with the extracts of normal urine prepared in exactly the same way.

2. This patient was a gentleman, 60 years of age, who had marked gouty deposits, but he had never had an acute or subacute attack; this was, therefore, quite a different type of the disease. His systolic pressure was only 98 mm. Hg; the amylic alcohol extract gave the normal rise, but the ethereal extract produced a comparatively small one.

Effect of diet.—The effect of diet is obviously a branch of the investigation which can be almost indefinitely extended, and I hope to be able to do more work in this direction in the future. It demands the most careful study in reference to the origin of the pressor bases. The factors I have so far investigated were the influence of (1) meat diet; (2) meat diet *plus* antiseptics; and (3) milk diet.

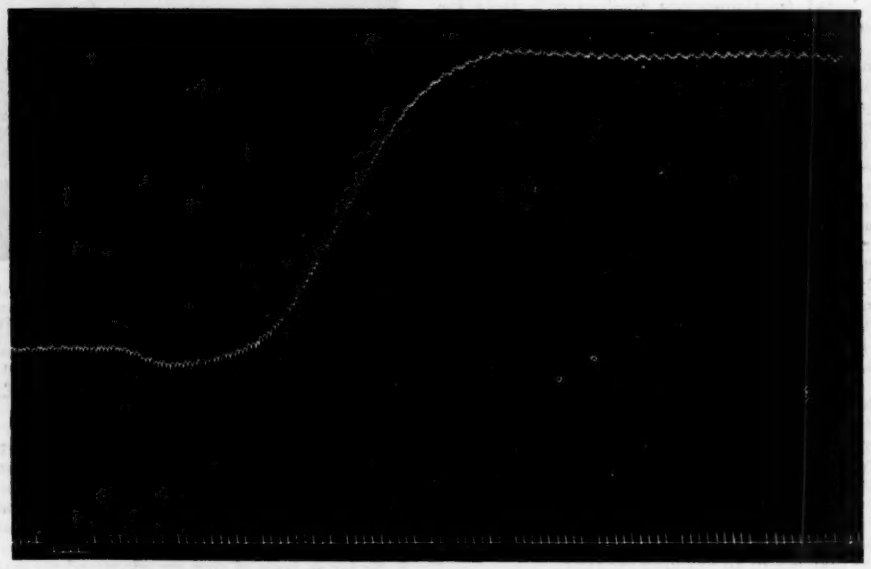
[1] THE LANCET, August 7th, 1909.

FIG. 1.



Blood pressure tracing from pithed cat taken from the carotid artery. This and the succeeding tracings are to be read from left to right. The time tracing marks seconds and is placed in the position of the abscissa of the blood pressure. The lowering of the level of the time tracing near the left hand end marks the period during which an injection was made into the external jugular vein. The material injected was a saline solution of the pressor base, which is soluble in ether, and the amount injected (3 cubic centimetres) represents the yield from 1250 cubic centimetres of normal urine.

FIG. 2.



This is a similar tracing obtained from the same cat. The injection here made was a saline solution of the base which is soluble in amylic alcohol, and again represents the amount obtained from 1250 cubic centimetres of urine. In this, as in the preceding tracing, the method used was the "charcoal method" described in the text.

Two subjects were placed upon a diet of meat, green vegetables, and a small quantity of bread for three days, during which time 2½ litres of urine were collected from each. They then continued for another period of three days to take the same diet, but received in addition 10 grains of salol and a quarter of a grain of calomel three times a day. Another 2½ litres of urine were collected during this period. They then each took a dose of magnesium sulphate preparatory to being placed on a diet of milk and biscuits (Huntley and Palmer's breakfast biscuits). During this third period of three days they had also every day half a pint of lacto-bacilline milk, and 2½ litres of urine were again collected. These urines were all examined by the older "direct method," as at that time I had not the advantage of knowing the "charcoal method."

As the general result it may be stated that the formation of the pressor bases was not influenced by these variations in the diet. The disinfectants in the doses administered had no effect in reducing the amount of the bases excreted. This fits in with previously recorded experiments, in which it has been shown how slight is the effect on intestinal putrefaction of medicinal doses of disinfectants given by the mouth.

The similar negative effect of a milk diet even in the presence of lactic acid bacilli is also interesting and shows that the bases in question can originate from casein. This was confirmed by an experiment with putrefying casein, which was treated in a similar manner to the urines. Both the ethereal and amylic alcohol extracts of this material produced pronounced rises of blood pressure when intravenously injected.

Intestinal putrefaction is no doubt largely inhibited by a milk diet, and this effect is now generally attributed to the carbohydrates present which favour the development of lactic acid bacteria, which in their turn inhibit the typical putrefactive organisms. Casein as such is not responsible for the prevention of putrefaction, as was shown by the experiment just alluded to which I performed with putrefying casein free from carbohydrates.

The fact that the pressor bases were present in the urine during a milk diet suggests that they are formed in the lower part of the intestine where the growth of the putrefactive organisms is less restricted, owing to the removal of the carbohydrates by absorption in the upper portion of the intestinal canal.

The remainder of the 32 urines at my disposal need not be referred to; they were mainly employed in the experiments I performed while elaborating my new method of isolating the bases.

I have selected from numerous tracings only three for reproduction to illustrate special points. Figs. 1 and 2 show the normal effect with the two extracts prepared by the "charcoal method." Fig. 3 shows the greatest effect with the amylic alcohol extract I have ever obtained from a case of distinctly high blood pressure (the lady 50 years of age previously mentioned). In no case of high blood pressure have I ever obtained any rise at all with the ethereal extract.

In conclusion, there are two side issues of my work that strike me as interesting.

1. I noticed in the urine of the case of gout with low blood pressure that scarcely any emulsion formed on shaking it with ether or amylic alcohol; this urine also contained a large deposit of uric acid. Urines which deposit uric acid are generally pale in colour, and the absence of emulsion when shaken with ether points to a diminution of the urinary colloid.[2] The nature of the colloid matter in urine is only imperfectly known, but it always contains sulphur in ethereal combination, and there is reason to assume that it is either chondroitin sulphuric acid or some derivative of this compound. Chondroitin sulphuric acid is the characteristic sulphur-containing constituent of cartilage, and the frequency of gouty deposits in cartilage is usually assumed to be due to some affinity between uric acid and this tissue. The disordered metabolic state which underlies the gouty state may upset the normal course of sulphur metabolism in cartilage, and certainly the condition of the urine just referred to is very suggestive in this relationship, although the exact mechanism at play is still an unknown quantity.

2. In addition to the bases which I have investigated, trimethylamine must be mentioned as a constant though small constituent of urine. Its amount has been shown to vary with diet,[3] but derives special interest as a product of metabolism. In cases of nerve degeneration its amount is increased[4]; in this case it no doubt originates from choline, and from similar bases derived from the breakdown of certain phosphatides in nervous tissue. Trimethylamine can be readily estimated in urine, and this is another subject which requires following up. The trimethylamine would probably be contained in my ethereal extracts mixed with isoamylamine. Some observations previously made in this laboratory in a different connexion showed that trimethylamine raises the blood pressure. This observation I was able to confirm, and trimethylamine must therefore be added to the list of pressor bases. Since doing this, I find that Abelous, who has performed the same experiment, obtained a similar result.[5]

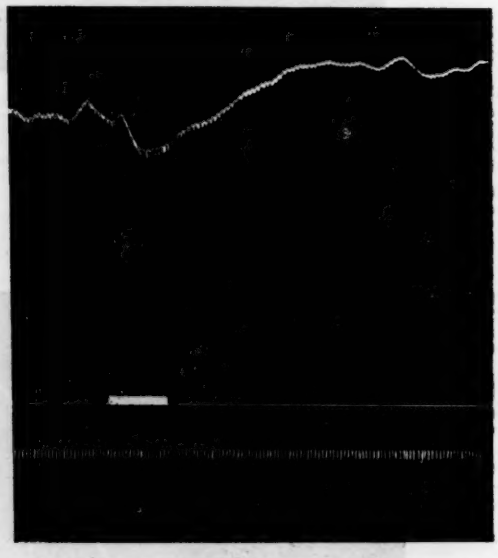
Conclusions.—The results of the research may be briefly summarised as follows:—

1. The pressor bases which are present in the urine of normal adults can be most readily obtained by shaking the urine with Fleming's blood charcoal, and subsequently extracting the charcoal with suitable reagents.

2. The urine of growing children contains these bases in minimal amount.

3. So far as the influence of diet is concerned, very little can at present be stated. In the two cases investigated, the substitution of a milk and biscuit diet for one rich in meat makes but little difference. Medicinal doses of antiseptics administered by the mouth do not make any appreciable difference in the amount of these products of protein putrefaction which is excreted in the urine.

FIG. 3.



This is the greatest rise of blood pressure similarly obtained in a cat produced by the amylic alcohol extract which I have ever obtained from a case of high pressure. The very small result contrasts very markedly with the large rise seen in Fig. 2. The amount of urine represented by the injection was the same in both cases. Ethereal extracts give no rise whatever. In this experiment the abscissa is drawn separately from the time tracing; the period of injection is indicated by a thick mark on the abscissa line.

4. In all cases of high blood pressure hitherto examined the urine contains very little of the bases in question, and in some cases they are altogether absent. The non-elimination of the bases probably indicates that they are retained within the body and play an important part in the production of the high pressure.

5. So far as cases of gout are concerned my materials have

[2] The relationship between urinary colloid and the solubility of uric acid is also noted in a paper just published by L. Lichtwitz, Zeitschrift für Physiologische Chemie, Band lxiv., p. 144, 1910.

[3] F. de Filippi: Zeitschrift für Physiologische Chemie, Band xlix., p. 433, 1906.

[4] K. Bauer: Hofmeister's Beiträge, Band xi., p. 502, 1908.

[5] Abelous and Bardier: Comptes rendus de la Société de Biologie, vol. lxvi., No. 11, 1909.

been rather scanty, and so any conclusions that may be formed must be taken with reserve. I scarcely think that there is any direct relationship between gout *per se* and the retention of the pressor bases, and yet in most cases which I have examined the diminution in the excretion of these bases is not proportional to the increase of arterial pressure observed; for example, the patient with a systolic pressure of 135 mm. Hg excreted about half the usual quantity found in normal urine, as judged by the intensity of the physiological effect.

6. In cases where the urine contains a deposit of uric acid there is a marked diminution of the colloid matter of that fluid. This colloid consists of or contains a sulphur compound—chondroitin sulphuric acid—which is a constituent of cartilage. The association of this condition with the frequency of urate deposition in cartilage is suggestive, and deserves fuller investigation.

I have great pleasure in acknowledging my indebtedness to Professor W. D. Halliburton for the use of his laboratory during my work and for his help in the blood pressure experiments, and to Dr. Rosenheim for his courtesy and suggestive aid during the investigation. To Dr. Mott and Dr. J. C. Muir I tender my cordial thanks for the specimens of urine which they have sent to me.

Harrogate.

THE OBSTRUCTION OF THE ILEUM WHICH DEVELOPS IN CHRONIC INTESTINAL STASIS.

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IN describing the causation, pathology, and treatment of chronic intestinal stasis I have illustrated and explained the changes in the appendix and ileum which arise in consequence of the progressive descent of the cæcum into the pelvis which takes place in this condition. In this communication I wish if possible to accentuate especially the change in the ileum in order to call attention to it in a more definite manner. I do so because it is most important and far-reaching in its influence for harm, and it has apparently not attracted the attention of any of the readers of my papers.

The cæcum loaded up with its fluid contents tends in the erect posture of the trunk to glide downwards and inwards into the true pelvis, which it struggles to occupy, together with the transverse colon and sigmoid, not only to the disadvantage of these structures themselves but also to the distinct detriment of the organs which exist normally in it. The mere hypertrophy of the muscular wall of this portion of the large bowel is insufficient to meet the excessive fluid pressure exerted upon it, and it gradually dilates and descends from its normal position. This tendency to falling of the distended cæcum is met by the formation of two series of resistances which develop as independent bands or thickenings in peritoneum. The thickening in the peritoneum is the first step from which the separate band or mesentery is subsequently developed.

The external series of peritoneal adhesions, bands, or mesenteries extends from the outer aspect of the cæcum upwards and outwards to the peritoneum lining the abdominal wall external to it (see Figure). The lowest of these not infrequently attaches the appendix, securing it in the first instance at its base and extending a variable distance along its length. In this manner the fixed portion of the appendix forms part of one of the ligaments or ties opposing the downward displacement of the cæcum. The result of strain exerted upon the appendix when the cæcum is full is to kink the distal mobile portion of the appendix upon that part which has taken on the function of a ligament and to partly or completely obstruct the lumen of its mucous lining. Such obstruction produces an accumulation in the distal portion of a transient or permanent character, and a condition which is described generally as appendicitis. In some cases a mass or concretion develops from the accumulated inspissated contents.

The other limb of the parallelogram of forces lies internal to the cæcum, and is an added strain along that portion of the mesentery which holds up the end of the ileum. In consequence of this strain a thickening forms on the under surface of the mesentery, and this contracts the mesentery along the line of strain. This exerts a drag upon the ileum at a point about two inches from its termination. In this way that piece of the ileum external to the area of thickening in the mesentery, together with that same thickening, form an internal resistance which holds up the dilated cæcum heavy with fluid contents and opposes its downward displacement. Therefore the last two inches of the ileum beyond the new band performs in addition to its normal function that of an internal ligament of the cæcum, precisely in the same way as the fixed portion of the appendix with the band securing

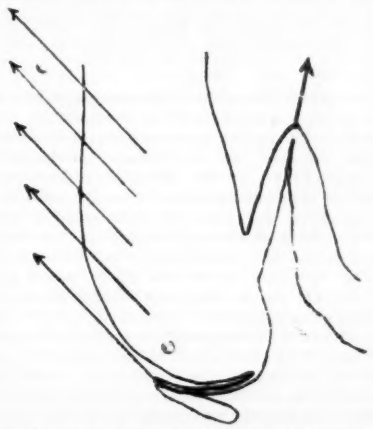

Diagram indicating peritoneal adhesions opposing the downward displacement of the loaded cæcum. The last adhesion is attached to the appendix.

it forms an external ligament of the cæcum. Again, as in the case of the appendix, the strain exerted upon the fixed portion of the ileum serves to reduce the calibre of its lumen and to produce an obstruction to the passage of fæcal matter through which it is damming back the material in the small intestine. This fæcal accumulation remaining for an abnormally long period itself undergoes changes and produces alterations in the intestines, which are experienced as discomfort, pain, or distress to the patient.

Clinically a varying degree of impairment of the function of the appendix is frequently associated with a similar defect in the end of the ileum. It is by no means necessary that the conditions should be associated, since the appendix may escape the grip of these newly formed peritoneal ties even in advanced cases of intestinal stasis. In proportion, however, as the appendix escapes performing its share in restraining the cæcum from getting too far into the pelvis, the greater is the proportion of strain thrown on the affected mesentery of the ileum and the more likely is this tube to be constricted by thickenings or bands. As indicated before, all these ties are represented in the first instances as thickened lines on the peritoneum and later as mesenteries free from the peritoneum to which they were originally attached. The skeleton represents a crystallisation of lines of force which when transmitted in one direction are laid down as compact tissue and when in varying directions as cancellous tissue. In precisely the same way the peritoneal thickenings and the bands or mesenteries into which they develop later represent the crystallisation of lines of strain and are evolutionary and functional, and have no relationship whatever with any inflammatory process.

The symptoms produced by the kink in the ileum are quite distinct from those which result from trouble in the appendix. They may be, and often are, associated, being produced by the same cause. The tenderness of the kink in the ileum extends from the umbilicus almost directly downwards and to the right, and is quite separate from the pain and tenderness of a fixed appendix. The distension of the small intestine is a marked feature and varies greatly with the time of day, since it is much worse when the abdominal wall is lax and tired. The pain develops or becomes accentuated at a more or less regular interval after the ingestion of food. It is increased by any jerky movement, as riding, running, especially up or down stairs, &c.

This kinking of the ileum is the cause of much of the pain

and discomfort that remains after the removal of the appendix. If the appendix has also been in trouble the pain and tenderness produced by it will have been removed by the operation, but the pain consequent on the kinking of the ileum still remains and is the cause of much disappointment both to the surgeon as well as to the patient. I would call the attention of the profession to the importance of this condition.

Cavendish-square, W.

SIGMOIDITIS AND MESO-SIGMOIDITIS.

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DURING the last 18 months I have met with two interesting examples of this comparatively rare condition. They seem to me to be of sufficient interest and importance to merit publication, especially as the disease, particularly in this country, has not received the attention it deserves, with the result that it is often mistaken for malignant disease. The clinical symptoms and physical signs may closely simulate those of carcinoma of the sigmoid colon. It is very difficult to distinguish the two conditions even when the abdomen is opened. In at least 12 of the 25 instances of stenosis collected by Telling, a diagnosis of carcinoma was made either before or at operation. The true nature of the disease may be realised only after resection or even after microscopic examination. When the extent of the "growth" or the condition of the patient in the presence of acute obstruction does not allow a radical operation, the mistake may not be discovered. The unusual prolongation of life after colostomy or the spontaneous disappearance of the "growth" may give an indication of the true state of things. Most of us know of several instances of this kind. The writer knows of at least three patients who have survived for many years after colostomy for supposed carcinoma of the pelvic colon. Dr. W. H. Maxwell Telling in his able paper upon Acquired Diverticula of the Sigmoid Flexure [1] has pointed out that several museum specimens long regarded as examples of carcinoma of the sigmoid are really inflammatory. He draws special attention to one of the most important causes of simple inflammation of the sigmoid flexure, "the presence of acquired diverticula in or near the sigmoid colon."

It is very easy to overlook these diverticula, especially when they are limited to the mesenteric border. They project into a greatly thickened mesentery, and their orifices are often so small that they can only be discovered by means of a probe. They are so hidden that they can be very easily overlooked. The writer would certainly have overlooked them if he had not previously read Dr. Telling's paper. They are especially common at the mesenteric border following the blood-vessels, where the muscular wall of the bowel is often deficient and ill supported. The retention of irritating and infective material in the diverticula may lead to inflammation and even to perforation of the thin-walled sacs. This may be followed by spreading or localised peritonitis, but when the diverticula are deeply embedded in a thick mesentery the inflammation may be confined to the mesentery and the outer walls of the bowel. In some cases suppuration may take place between the layers of the mesentery, and pus may discharge into the bowel or into a diverticulum. In some it may burst into the peritoneal cavity. In many cases appendicitis may be closely simulated except that the swelling is on the wrong side. Sometimes the inflammation is more chronic and leads to much thickening and shortening of the mesentery and interstitial inflammation of the intestinal wall with secondary stenosis. The mucous membrane may remain fairly healthy for a long time. The condition is by no means limited to the sigmoid colon. Thus in one of my patients it extended from the pelvic colon to the splenic flexure. In others it has been limited to the splenic flexure or to a short segment of the transverse colon. The formation of diverticula in the colon seems to be chiefly due to long-continued constipation associated with failure of the muscularity of the intestinal wall. It is therefore a condition which is not often seen before middle age, and Telling points out that "the average age of those in which the diverticula caused clinical symptoms was 55 years" (47 cases). It is, of course, admitted that the presence of diverticula is not the only cause of inflammatory stenosis of the large intestine. Tuberculous infiltration, especially of the cæcum and ascending colon, may closely simulate malignant disease. Gonorrhœal, syphilitic, and tuberculous tubular stenosis of the rectum are well-known conditions. The spread of inflammation from the female pelvic organs may give rise to true stenosis of the sigmoid or pelvic colon.

Detailed accounts of my two cases may now be given. They are of especial interest for the two following reasons: 1. Both of them were mistaken by me and others before exploration for growth of the descending or sigmoid colon. It is possible that the mistake would not have been made if sigmoiditis had been borne in mind. In any case I do not think that a correct diagnosis would have materially altered the treatment, but the prognosis given before the operation would have been different. 2. Circumstances made it necessary for different operations to be performed for the two patients. In one the ileum was short-circuited to the front wall of the pelvic colon 5 inches from the anus. This saved the patient's life and made her much more comfortable. It improved her general condition, but it has not cured her. In the other the diseased part was resected with complete success.

CASE 1.—The first case was that of a lady, aged 60 years, a patient of Dr. J. Kidd. She had suffered from constipation for many years. There were only two actions of the bowels in a fortnight during May, 1908, while the patient was on a holiday at Lugano. The symptoms had got very much worse by July 21st, 1908, when she was seized with severe colicky pains in the abdomen. The bowels were opened with difficulty, so that opening medicines had to be taken regularly, and these were followed by liquid motions. During the last few weeks liquid stools and slime were frequent, but no formed motions were ever passed. Tenesmus had been very severe and spurious diarrhœa urgent and often uncontrollable, so that a diaper had to be worn. Usually only mucus and flatus escaped, but this gave great relief. Flatulence had been very troublesome. The wasting had been considerable. On examination the patient was found to be thin, shrivelled and anæmic. The bowels had not been opened for three days. The tongue was furred and white, and the abdomen was distended but quite soft and supple. Obvious peristalsis could be seen, and this was especially marked in the transverse colon. The descending and sigmoid colon could be felt in the iliac fossa, and the swelling and hardness extended up into the left loin and under the cover of the ribs near the splenic flexure, where the patient said that she had had much pain and had noticed gurgling. There was shifting dulness in the flanks. The transverse colon was greatly dilated. There was no tumour felt on pelvic examination. A systolic apical bruit was heard and the ankles were œdematous. Chronic intestinal obstruction due to growth of the descending colon was diagnosed, and an operation advised for its relief. The patient expressed strong disapproval of colostomy, but this did not seem likely to be necessary, because either resection or lateral anastomosis was thought to be possible. Upon opening the abdomen on August 22nd about two pints of sanious fluid escaped. The colon from just below the sacro-iliac synchondrosis to the splenic flexure was greatly thickened, red, and œdematous. It formed a rigid tube with a very thick wall and very narrow lumen. The mesentery had shortened so much that only a very short meso-sigmoid could be found, and there was no sigmoid loop of bowel, but only a nearly straight rigid tube, ending abruptly at the splenic flexure. There was no meso-colon. The peritoneal tissues on either side and behind the colon were œdematous. In view of the patient's feeble condition and the presence of subacute obstruction which was nearly complete, and the condition of the distended transverse colon which was full of hard scybala, immediate resection was considered inadvisable and too risky. Moreover, the extent of bowel to be removed was very considerable, and the patient had refused her permission to a colostomy. It was therefore decided to join the ileum to the front of the pelvic colon or rectum at the lower border of the disease. Even there the bowel was not quite healthy, and it was so fixed that the anastomosis was very difficult. The friable condition of the large intestine and the need to make the opening very low down added to the difficulties. However, with the aid of clamps and the Trendelenburg

[1] THE LANCET, March 21st (p. 843) and 28th (p. 928), 1908.

position, a side-to-side union was made between the ileum and the pelvic colon, the lower angle being about 5 inches from the anus. Three layers of sutures were used, one piercing all the coats, and two sero-muscular; and the great omentum was wrapped round the front and upper side of the anastomosis. The anæsthetic was ably given by Dr. F. E. Shipway, and Mr. Norman Flower, my house surgeon, assisted at the operation. The pain and rectal tenesmus were greatly relieved by the operation, and death from intestinal obstruction was averted. At first the bowels were opened very freely, generally about six or eight times in 24 hours. The motions were usually liquid, very offensive, and often contained a little blood. Occasionally some scybala came away with the daily enema which was given. Sour milk was tried and a variety of other things without affording much relief. The abdomen remained rather distended, supple, and flatulent. The motions gradually became less frequent and more solid. The thickened descending colon could be felt quite easily. The patient was able to leave the nursing home and return to her home considerably better ten weeks after the operation. Two months later Dr. R. J. Ryle kindly wrote:—

On the whole her condition is not much changed. The abdomen is constantly wind-distended and keeps the outline of a football. On the whole, we think the distension is a little less, but the abdomen remains always tympanitic except over the left flank, where there has always been a less resonant region. At times large moving coils can be seen. The bowels have in general been relaxed, two or three loose actions per day being the rule, but just lately within the last three weeks they have taken a turn of constipation, relieved only by enemata. She cannot turn over in bed without a feeling of dragging. She walks with the aid of a nurse on one hand and a stick in the other once or twice a day. The rest of her time is spent on a sofa in the room next her bedroom. Food is really no difficulty. She seems able to take one food as easily as another, and I cannot find that the intestinal distension is at all affected by the character of her food. I tried lacto-bacillin (Metchnikoff's form), but with no result. She is perhaps a little stouter in the limbs and looks well in the face. There is, at any rate, no evidence of any growth, which is a satisfactory feature, and we try to find some symptom of slow improvement.

About this time I suggested a second operation, either the resection of the diseased part of the colon, or section of the lower end of the ileum with blinding of both cut ends; but the patient did not wish anything more done. At the middle of November, 1909, Dr. Ryle kindly wrote as follows:—

As to Mrs. ——, there is not very much change in her general condition. She spends most of her life on a sofa in her bedroom, but goes out in a bath chair two or three times a week. Her abdomen has still the figure and resonance of a football, and she complains a good deal of feelings of a great weight "inside" and of "dragging" if she turns over in bed or moves much. She has become a good deal stouter. She takes nourishment very well and suffers less from thirst. She complains still of tenderness or pressure in the left hypochondriac region, where there is still a little definite fulness. The enlarged glands, which were easily felt along Poupart's ligament on the left side when she came home a year ago, have quite gone. There are at times various joint pains, especially in the knees; but her general health is good. There is sometimes complaint of discomfort and tenderness in the bladder. With a little cascara and strychnine twice a day after meals, aided by an occasional cascara pill at night, or rarely a grain of calomel, things are kept going. The actions are, more often than not, not properly formed. An enema about once a week or so is given to make sure that the lower part of the alimentary canal is cleansed. She complains of having very little expulsive power in the rectum.

CASE 2.—A stout man, aged 49 years, was referred to me by Dr. W. Hale White and Dr. C. J. Woollett in the middle of September, 1909. Dr. Woollett gave the following excellent history:—

I have known Dr. —— for about five years, during which time I have occasionally attended him for laryngitis (simple) and for shingles; his general health was good, and he weighed about 16 stones. This spring Dr. —— consulted me about a pain from which he sometimes suffered on the left side of the abdomen. The pain was not constant and, as a rule, not severe. He stated that he had had it, on and off, for the last 30 years, and that, when he was a student, a German doctor told him that he was suffering from enlargement of his colon. Dr. —— told me that he suffered habitually from constipation, to overcome which he was in the habit of taking purgative pills, and consequently had two or three actions of the bowels per diem; he did not pass blood. As a rule he had a good appetite, was a quick eater, and of a very energetic temperament. On inspection and palpation of the abdomen, and on rectal examination, I could detect nothing in the shape of a tumour. Deep pressure over the sigmoid caused some pain. The abdominal walls were then rather fat. At the beginning of September I was again called to see my patient. He had lost about 2 stones since my last attendance and had suffered frequently from his abdominal pain. At this date he complained of the pain being more acute, and he had had rigors on the previous day. I do not think that he had vomited. On examination there was a temperature of about 102°, a quick pulse, furred tongue, and excessive tenderness on pressure over the sigmoid. The treatment consisted of hot fomentations and a febrifuge medicine and enemata. After a few days the temperature became normal, and the tenderness subsided, and then for the first time I discovered a tumour in the sigmoid region. I advised my patient to see Dr. Hale White who sent him to you.

Upon examination Dr. —— looked sallow, wasted, and flabby, but not thin. The abdomen was very flabby and had clearly wasted a good deal. In the left iliac fossa a rounded moveable swelling of about the size of a cricket-ball could be felt. It moved more freely from side to side than vertically. He suffered much from flatulence, indigestion, and insomnia. His worse symptom was very severe tenesmus, which made him pay frequent visits to the lavatory, where he sometimes stayed for an hour at a time without getting much relief, only passing mucus and flatus. The pain extended up along the colon as far as the ribs on the left side. Upon rectal and bimanual examination no tumour could be discovered in the pelvis or bowel. The diagnosis was somewhat uncertain, especially on account of the unusually long duration of the symptoms of obstruction and the history of rigors, but an exploration seemed to be imperative. A growth of the sigmoid colon with inflammatory changes around it was considered to be the most probable diagnosis, but in view of the long history Dr. Hale White suggested that the disease might be non-malignant. The bowels having been cleared out as well as possible by means of castor-oil, ether was administered by the open method by Dr. W. H. Trethowan. The abdomen was opened through the lower part of the left rectus, and a tumour, thought to be malignant, was discovered near the middle of the sigmoid colon and its mesentery. The lumen of the bowel was considerably narrowed, but the bulk of the swelling was towards the mesentery, which was much shortened and very thick. Nodules, thought to be enlarged glands, also extended upwards along the inferior mesenteric vessels for several inches. Resection was decided upon, although the condition did not appear to be a very hopeful one because of the extensive infection of the lymphatic glands. The Trendelenburg position was adopted, and the small intestines were displaced upwards and to the right and carefully packed off with gauze pads. An incision was made along the parietal peritoneum to the left of the root of the mesocolon, and extending upwards nearly as far as the splenic flexure. By gauze dissection the sigmoid and its mesentery were separated from the iliac fossa and turned inwards. The ureter, which was attached to the mass, was carefully separated off and displaced backwards and inwards out of the way. When the bowel had been sufficiently freed it was turned back to the left, and the peritoneum covering the inferior mesenteric vessels was carefully incised close to the spine. The lymphatic vessels and glands were separated from the blood-vessels by gauze dissection from above downwards. The splenic flexure was mobilised after the manner recommended by Moynihan. The bowel and the mesentery were then clamped and the diseased parts were isolated and removed, care being taken to preserve the continuity of the superior hæmorrhoidal vessels. The mesentery was tied and the rent in it was sewn up. An end-to-end union was made by direct sutures, the first layer passing through all the coats, the second including only the sero-muscular tissue. A small temporary drain was placed at the lower angle of the wound, which was elsewhere closed in layers in the usual way. To ensure absolute rest to the bowel very little but water was given by the mouth for three days, and morphine was injected subcutaneously to procure sleep on the first and second nights. No purgative was given by the mouth and the bowels were allowed to open naturally with the aid of a small oil enema on the eighth day. The patient made a good recovery and left the private home a month after the operation. Soon afterwards he went away for a month's holiday. Dr. Woollett has kindly kept me informed of his further progress which has been uninterrupted. I saw the patient on Feb. 24th. He was looking very well and had gained over 2 stones in weight. He had been doing his usual hard work for a month without any inconvenience beyond a little "indigestion." He occasionally has to take an aloin pill. Six and a half inches of bowel were removed. Upon slitting it open along its free border no growth was seen. Something bulged in at the mesenteric border. The mucous membrane was neither thickened nor ulcerated. Upon cleaving the mesentery many necrotic foci were seen (Fig. 2), and several of these had broken down into small abscesses. A probe could be passed into several pouches (Fig. 1), extending into the mesentery from the mesenteric border of the bowel, and reaching quite near to some of the breaking-down areas. The necks of the pouches were quite narrow, so that

they would be overlooked unless specially sought. None of the diverticula were visible on account of the thickness of the fat mesocolon. A piece of the diseased mesentery was sent to the Clinical Research Association for microscopic examination. The following report was returned:—

This specimen is composed of fat and fibrous tissue with occasional nerve fibres. It is inflamed and shows marked leucocytic infiltration and endothelial proliferation, with a phagocytic giant cell here and there. We find no evidence of tubercle or of malignant growth.

Diagnosis.

Monsarrat,[2] and especially Moynihan[3] and Maxwell Telling[4] have drawn attention to the mimicry of malignant disease by inflammatory stenosis of the sigmoid colon. It is very important to bear this in mind. The following points may suggest the innocent nature of the obstruction. 1. The long duration of symptoms, especially the history of life-long constipation. Both my patients had suffered severely from constipation for many years. 2. The absence of blood in the stools on repeated examination. In one of my cases blood was never noticed, but no microscopic examination was made. In the other blood was infrequent, but was occasionally present towards the end. In this case the mucous membrane was seen to be considerably inflamed at the operation. But in most cases the inflammation seems to to be almost confined to the outer coats of the bowel, with the result that bleeding is unusual. The repeated presence of pus in the motions is important, especially in the absence of blood. In my two cases the pain and tenesmus were very severe and I think more marked than in any case of malignant disease that I have ever seen. The slight degree of cachexia is said to be of value, but in both my cases the disease had lasted a long time when I first saw them and the obstruction was almost complete in one of them. In the other there was suppuration between the layers of the mesentery. It is not surprising therefore that each had lost several stones in weight and looked very ill. The sigmoidoscope may be of value in some cases, perhaps excluding growth, but it was not used in either of my patients for various reasons. One of them was too ill to waste time on the examination, immediate relief of the obstruction being necessary to save life. The presence of an obvious tumour and the severity of the symptoms demanded an early exploration in my second case. An anæsthetic would have been necessary for the examination in both cases in view of the extreme local tenderness. Moreover, it is hard to believe that the sigmoidoscope would have helped very much in these particular cases. In one of them the inflammation was taken for growth even after the abdomen had been opened. But when chronic inflammation has led to stenosis of the bowel giving rise to chronic intestinal obstruction, palliative treatment is not likely to afford permanent relief. Laxative medicines and repeated enemata may make life tolerable for a time, but an operation becomes necessary eventually in order to save life, and it is wise to recommend this before the obstruction becomes complete so that a radical operation may be hopefully undertaken at one sitting.

FIG. 1.

Sigmoiditis and meso-sigmoiditis. View of the piece of sigmoid colon removed from the left and behind, showing glass rods introduced into two of the diverticula, which extend into the mesentery and have given rise to chronic inflammation and suppuration between the layers of the mesentery. Note the enormous increase of fat in the mesentery, especially of its anterior surface. The mucous membrane is healthy, but the lumen of the bowel was greatly narrowed by the encroachment of the inflammation of the mesentery and the outer coats of the bowel.

FIG. 2.

Sigmoiditis and meso-sigmoiditis. The same specimen as in Fig. 1. The mesentery has been cleft longitudinally. The two halves are held apart by means of glass rods, thus showing the extreme amount of fibrosis of the mesentery, with many necrotic foci and the ends of two probes which were introduced into diverticula.

The Choice of Operation.

So few cases have been recorded that it is difficult to say what is the best thing to do when a correct diagnosis has

[2] Brit. Med. Jour., vol. ii., 1907, p. 65.
[3] Brit. Med. Jour., vol. ii., 1907, p. 1381, and Edinburgh Medical Journal, March, 1907.
[4] THE LANCET, March 21st and 28th, 1908.

been made either before or at the operation. Dr. Telling has drawn attention to the fact that these patients are particularly susceptible to infection. It is very important to bear this in mind when deciding upon the safest and most suitable operation for any given case. Peritonitis and suppuration of the abdominal wall have followed in a large proportion of cases. It is very important to take every precaution against infection. The following operations may be briefly discussed: (*a*) colostomy; (*b*) ileo-sigmoidostomy; and (*c*) resection.

(*a*) *Colostomy.*—This operation affords much relief without great risk to life, but an artificial anus has so many obvious disadvantages as to make it undesirable for sensitive patients. As a temporary measure it may be tolerated when primary resection or short-circuiting is not safe or is impracticable at the time. It is particularly objectionable for the permanent treatment of patients who are not suffering from malignant disease and may be expected to survive for many years. It is of the utmost importance to bear in mind that what appears to be an obvious malignant growth of the sigmoid colon may be only inflammatory. The mistake may be made even when the abdomen is opened. When operating for acute following upon chronic intestinal obstruction, or when performing colostomy because a supposed growth is too adherent and extensive for removal, it may be useful to remove a small piece for microscopic examination. It must be remembered, however, that a good deal of inflamed tissue surrounds a growth, so that too much reliance must not be placed upon a negative report. Occasionally the rest and drainage afforded by the colostomy may lead to partial or even to complete disappearance of the stricture so that the artificial opening may be closed. In other cases a temporary colostomy may be followed by secondary resection of the diseased part of the colon and the restoration of the continuity of the bowel.

(*b*) *Ileo-sigmoidostomy.*—It is unfortunate that the disease is usually in the part of the colon which is the most convenient for the anastomosis. Moreover, the anatomical relations are greatly altered by the disease. The meso-sigmoid is shortened and thickened and the disease may extend to the descending loop of the sigmoid or pelvic colon, so that it is almost impossible to make the anastomosis in healthy bowel below the disease. When the stenosis is high up, as, for instance, in the splenic flexure in Mr. Moynihan's[5] case, ileo-sigmoidostomy is easily performed and safer than resection; and the result was good in Mr. Moynihan's case. In my first patient the disease extended from the splenic flexure to the upper part of the pelvic colon. The patient was too ill for an extensive resection, and she strongly objected to colostomy. The ileum was therefore joined to the front wall of the pelvic colon which was not free of inflammation. The result in this case would probably have been better if I had either narrowed or occluded the ileum between the anastomosis and the cæcum. Mr. Moynihan narrowed the ileum in his case. When the anastomosis has to be made so very low down in the large intestine it is apt to be followed by more or less diarrhœa lasting for a long time. Ileo-sigmoidostomy is not likely to be practicable in many cases of sigmoiditis, especially when the disease extends to the meso-sigmoid. Short-circuiting is not likely to completely cure the disease permanently, for the diverticula and inflamed tissues are left in the body and they give rise to further trouble, just as the diseased appendix does until it is removed after appendicitis. When it is practicable it may save life and afford relief. It remains for experience to prove how far the relief may be permanent. If secondary symptoms develop there is no reason why secondary resection should not follow the anastomosis when the general condition of the patient is more satisfactory.

(*c*) *Resectum.*—Very few cases of resection for simple stenosis of the colon are recorded. When the local condition is well advanced and the obstruction is chronic and incomplete, resection is probably the best treatment and affords the best guarantee of complete recovery. The greater risk attending it is worth running in order to avoid an objectionable colostomy. In the absence of complete obstruction primary resection is far preferable to colostomy followed by secondary resection. In some cases secondary resection may become necessary after a primary short-circuiting operation.

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[5] Loc. supra cit.

VICIOUS CIRCLES ASSOCIATED WITH DISORDERS OF THE NERVOUS SYSTEM.

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THE central nervous system is the capital of the human microcosm with whose remotest outposts it is, for good as well as for ill, in constant communication. In health the closest correlations and polarities exist between it and every other organ; in disease such correlations and polarities are no less intimate. Generally speaking, such correlations make for good, one organ assisting the other in beneficial reciprocity. But there are occasions when disorder in the one breeds disorder in the other, cause and effect acting and reacting injuriously on each other. When such is the case, there is established a *circulus vitiosus*, a grave condition which has hitherto received but scanty attention.

It would be impossible to enumerate the reciprocal interdependencies operating in the healthy organism: fresh illustrations are constantly being discovered with the progress of research. Equally impossible to enumerate the reciprocal interdependencies which accompany pathological processes. But it will be of interest to point out some examples as met with in one great group of disorders—viz., those of the nervous system. For the sake of clearness functional and organic disorders will be treated separately.

I. *Functional Disorders of the Nervous System.*

(*a*) *Neurasthenia.*—Perhaps the commonest and most protean of such functional disorders is neurasthenia. Owing to its ubiquity the disease has been described as *non morbus, sed morborum cohors.* There is scarcely an organ that may not at times be affected. Vicious circles may complicate any of the manifestations of neurasthenia, whether the mental or psychic faculties, or the digestive, vascular, sexual, or other systems are involved. "In no complaint does it happen more frequently that the patient gets into a vicious circle, the fundamental disorder producing symptoms which again maintain and aggravate the disease."[1] A familiar example is insomnia, a most obstinate disorder in the neurotic, and one which so depresses the nerve centres as to aggravate the primary trouble. Indeed, Clifford Allbutt describes insomnia as "almost a universal feature of neurasthenia; as one of the links of the vicious circle in which the victim is enchained."[2] Mental depression and malnutrition often accompany the insomnia, each factor reacting on the other.

Diese Depression bleibt nicht ohne Rückwirkung auf die Ernährung, den Schlaf und die Vitalen Functionen, und so geht es in einem unseligen Circulus vitiosus immer weiter abwärts und schwere andere, nicht mehr in der Rahmen der Neurasthenie gehörige Neurosen und Psychosen, können sich in kürzerer oder längerer Zeit entwickeln.[3]

Shakespeare well describes the condition:—

> "Sorrow's weight doth heavier grow
> Though debt that bankrupt sleep doth sorrow owe."

Even apart from insomnia melancholy often causes malnutrition, which in turn reacts on the mind. In Rayner's words:—

In diseased conditions, especially in the depressed emotional states, this interaction of the mind on the body and of the bodily state on the brain establishes a vicious cycle of nutritional disorder, which tends to increase and prolong the disease.[4]

Krafft-Ebing has drawn attention to a similar mental condition set up in neurotic persons when attacked or even threatened by illness:—

Mit der Zeit entwickelt sich hier ein wahrer *Circulus vitiosus* gestörter Beziehungen zwischen Psyche und Leiblichkeit, in dem eine Fülle von psychisch ausgelösten Functionsstörungen in den extracephalen Organen projicirt wird und diese wieder auf die Psyche, ganz besonders auf die Stimmung zurückwirken.[5]

That the power of the mind over disease was well known to the Greeks is shown by a quotation from Euripides[6]:—

> Λῦπαι γὰρ ἀνθρώποισι τίκτουσιν νόσους.

Vicious circles may be established by the use of alcohol and various drugs.

In a neurasthenic individual a stimulant gives temporary relief, but leaves the neurasthenia as it is or even increases it, and afterwards the neurasthenia causes an irresistible desire for the stimulant which, while it gave relief, aggravated the disorder. Therefore the substances in question cannot be considered as the only causes of the disorders mentioned, but they form a secondary link in the vicious circle, which always in pathology plays such an important rôle, the primary link being the morbid constitution.[7]

The morphia habit gives rise to a similar concatenation of symptoms.

Dans ces conditions (i.e., in morphinomania) le sujet tourne dans un véritable cercle vicieux. ..... Avant le repas il se pique pour exciter l'appétit toujours défectueux; après le repas, nouvelle piqure pour faciliter la digestion. ..... Aussi les doses injectées ne tardent-elles pas à devenir de plus en plus répétées, de plus en plus considérables.[8]

We may now pass to forms of neurasthenia in which some peripheral organs are reciprocally involved with the central nervous system. The sufferer, by fixing his consciousness with morbid intentness on his organs, creates not merely unhealthy sensations but also functional disorders—e.g., palpitation, flatulence, polyuria, nausea. It is indeed difficult to assign the limits to auto-suggestion, so far-reaching and imposing may be the consequent disturbance. An illustration is met with in women in whom ovarian or uterine coexists with nervous disorder. In such cases we have frequently "to deal with a vicious circle, with local and constitutional states so interacting that no real improvement is possible until both the general and local states receive their due share of attention."[9] Herman gives an example:—

In chronic ovarian pain with neurasthenia effects follow one another in a vicious circle. The patient feels more severely the ovarian pain because her nervous system is too sensitive. The persistent ovarian pain keeps the nervous system weak and sensitive and further weakens it. In bad cases the circle can only be broken by removing the ovaries.[10]

A vicious circle is frequently associated with sexual malpractices and with spermatorrhœa.

Ausserordentlich häufig besteht bei Neurasthenikern beiden Geschlechtes, hauptsächlich bei Ledigen, die Neigung den Geschlechtstrieb auf *masturbatorischem Wege* zu befriedigen; es ist oft schwer zu unterscheiden, ob die Masturbation als die Folge oder als die Ursache der sexuellen Neurasthenie anzusehen ist, gewöhnlich handelt es sich um einen Circulus vitiosus; infolge früherer Masturbation stellen sich sexuelle Störungen ein, welche den normalen sexuellen Verkehr unmöglich machen, und da die normale Befriedigung dadurch aufgehoben ist, wird die Masturbation fortgesetzt, wodurch wieder eine Besserung der sexuellen Beschwerden verhindert wird.[11]

Anæmia with its secondary effects on nutrition may form a grave complication of neurasthenia. Löwenfeld thus describes it:—

Vielfach ist die bei Nervenleidenden bestehende Anämie nicht Ursache, sondern nur Folge der nervösen Affektion. Letztere führt durch Beeinträchtigung des Appetits und der Verdauung (nervöse Dyspepsie) zu Störungen der Allgemeinernährung und damit zu einem Circulus vitiosus, indem die Verschlechterung der Allgemeinernährung sehr wesentlich zur Unterhaltung und Steigerung der bestehenden nervösen Erschöpfung und damit auch der nervösen Dyspepsie beiträgt. Diesen Circulus vitiosus zu durchschneiden, erweist sich oft als eine der schwierigsten therapeutischen Aufgaben, welche an den Arzt herantreten können.[12]

The vascular, digestive, and sexual circles associated with neurasthenia apply *mutatis mutandis* to the allied disorder hysteria.

(*b*) *Other functional disorders.*—Apart from neurasthenia various conditions are met with in which cause and effect bear reciprocal relations to each other. Overwork supplies a common example. The overwork produces headache and insomnia, which react on each other and perpetuate the condition unless the circle can be broken. Again, sickness in a nursling may so upset the equanimity of the nursing mother as to injure her supply of milk. This in turn causes illness in the infant and so further injures the health of the mother.

Between the nervous system and the gastro-intestinal tract many illustrations of disordered correlations may be observed. A series of these have already been published,[13] but various others also occur. Ewald draws attention to a state of anorexia induced by cerebral disease and reacting on the mental processes. "Thus a vicious circle is established which may under certain conditions lead to the most serious consequences."[14] Axenfeld, speaking of neurotic dyspepsia in women, says:—

Si l'état dyspeptique s'accentue davantage encore, la malade tourne dans un véritable cercle vicieux morbide; le nervosisme ayant créé la dyspepsie, celle-ci produit l'anémie qui, à son tour, entretient dans le système nerveux cet état si pénible de faiblesse irritable dont souffrent les malades.[15]

The inertia of the nervous system produced by dyspepsia reacts on all the eliminating organs, causing arrears of excretion to accumulate, which again increase the inertia.[16] Especially is this the case where chlorosis is superadded. Even the lungs come in time to be involved, and "the patient lies in a vicious circle of a reduced activity of the respiratory centre, due to the anæmia it should help to dispel."[17]

I have elsewhere described numerous reciprocal interdependencies between the nervous and the vascular systems.[18] Only two illustrations need here be given.[19] In heart disease vomiting is not uncommonly due to purely nervous influences acting through the pneumogastric. "The vomiting forms a link in the vicious circle which may ultimately prove fatal; and if it refuse to yield it accelerates the end." Again, "Depressing emotions contribute to failure of compensatory hypertrophy of the heart; and in this respect also a vicious circle is formed, which often can be broken by judicious management." Epilepsy is associated with another variety of circle, inasmuch as every attack increases the labile condition of the nerve centres and facilitates recurrence. In fact, recurrence is to a large extent the result of the previous attack, culminating at times in the status epilepticus.

The accompanying figure shows how these circles can be represented diagrammatically.

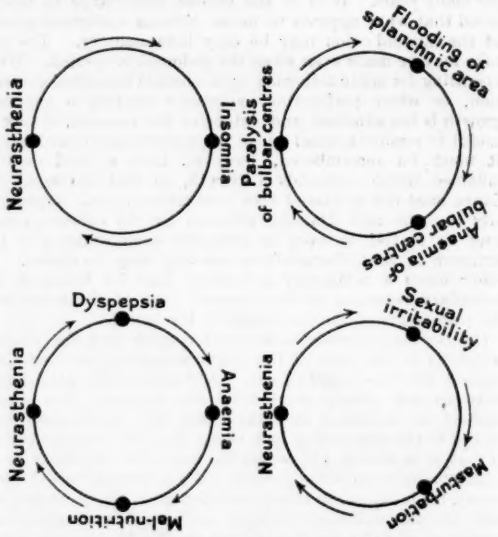

Diagram showing the analysis of vicious circles into component factors.

II. *Organic Diseases of the Nervous System.*

Leonard Hill draws attention to a vicious circle which is established when intracranial hæmorrhage causes increased cerebral compression and thus leads to a secondary increase of compression by the obliteration of the veins and capillaries in the affected area and a consequent congestive œdema. He says:—

The high blood pressure which exists in those capillary areas surrounding the seat of complete vascular obliteration will lead to increased transudation of fluid, since plasma may pass more easily into the brain substance than the blood through the compressed capillaries. The transudation will take place at almost arterial tension, will increase the volume of the foreign body, and so will lead to compression of other capillary areas. A *circulus vitiosus* is thus established and the cerebral anæmia may spread indefinitely.[20]

And again:—

In meningitis, tubercular meningitis and cerebral abscess, compression can arise by the accumulation of inflammatory exudations, by inflammatory dilatation, by thrombosis and blocking of vascular areas; and whenever the Sylvian aqueduct and the veins of Galen are obliterated by intraventricular transudation. In all these pathological states a *circulus vitiosus* can be established leading to advancing cerebral anæmia. The pathological cause of ventricular hydrocephalus is no doubt to be found in blocking of the veins of Galen and the Sylvian aqueduct.[21]

Another form of circle may be established in cases of hydrocephalus where the ventricles are dilated with fluid. The dilated ventricles may so displace the adjacent parts as to press on and increase the obstruction to which the accumulation of fluid was primarily due. For example, the cerebellum and medulla may be pressed down into the foramen magnum so as to plug that aperture. Such plugging in turn increases the distension of the ventricles and renders the condition a self-perpetuating one. The dilated ventricles again (by compressing the membranes of the nerve roots) may close the lymph paths or natural drainage

channels, which closure in its turn aggravates the ventricular dilatation.[22]

Inflammatory conditions, where toxins dilate the blood-vessels, alter the metabolism of the tissues and raise the osmotic pressure (by increasing the crystalloidal cell-products), are often complicated by a vicious circle. The tissues swell at the expense of the blood-supply of neighbouring parts, where there are no toxins and no vaso-dilatation, or œdema. "The anæmia so produced may in its turn damage the tissue metabolism of these parts, and set up congestion and œdema therein, and thus a vicious circle may be established."[23]

Circles Associated with Injudicious Treatment.

It cannot be doubted that vicious circles have been established by erroneous treatment in various disorders of the nervous system, although it may be hoped that such error is less common than formerly. The abuse of bromide of potassium in traumatic neurasthenia supplies a case in point. The outstanding symptoms of many of the spinal injuries that follow upon railway accidents are spinal tenderness, stiffness, and pain, associated (in severe cases) with neurasthenia and other signs of nervous prostration. These symptoms were supposed to indicate that irritation or inflammation of the spinal cord was present, which must be arrested by, or controlled by means of, a sedative. Consequently it became the fashion to administer bromide of potassium in large doses for weeks together. Now bromide may produce symptoms closely akin to those of traumatic neurasthenia, with the result that unwary practitioners confused the symptoms due to the bromide with those of the traumatic neurasthenia and continued to increase the dose in the hope of checking those symptoms. The effect was that not infrequently patients got worse and worse under the influence of the drug. As soon as the drug was discontinued, all the symptoms of the supposed neurasthenia vanished.

A case of litigation is actually on record in which a claim was based on the supposed presence of an inflammatory affection of the spinal cord and its membranes as proved by a cutaneous eruption, whereas this cutaneous eruption was in point of fact an acne induced by bromide of potassium![24] This example shows how cause and effect may be inextricably confused, increased doses of bromide of potassium being administered to remove the very symptoms the drug had produced!

Another artificial circle may be established where minor uterine or ovarian disorders receive undue medical attention and thus provoke in the patient an unhealthy mental condition which exaggerates and perpetuates the trivial local disorder. Well-intentioned but injudicious professional solicitude thus forges a chain within whose links the neurotic woman may be bound until her life becomes a wreck. Wholesome advice combined with tonic treatment would generally prevent so dire a disaster.

As a third and last example may be mentioned the abuse of strychnine in such cases of severe shock as accompany major operations. Under such conditions there is exhaustion of the nerve centres combined with dilatation of the splanchnic area and a marked fall of blood pressure. The routine treatment formerly consisted in the use of such stimulants as strychnine or brandy. Recent research, however, based on manometric observations, has proved that stimulants are useless in arresting the fall of blood pressure. Indeed, their administration has the effect of still further exhausting the nerve centres and of aggravating the condition. In other words, the symptoms of shock led to the administration of strychnine, which administration in turn increased the shock.[25] Many cases might have recovered but for the strychnine.

Conclusion.

Space will not allow of a discussion of the treatment of vicious circles, whose number and area are practically unlimited. But emphasis may be laid on the importance of an accurate diagnosis of the interacting processes. The old maxim applies—*Qui bene diagnoscit, bene medibitur*—and the alert physician, remembering that the condition is one which *vires acquirit eundo*, will do well to act on another maxim—*venienti occurrite morbo*. But at times the diagnosis may be far from easy, since one or other factor may be so concealed that the closest investigation is required. Well worth pondering are the words of Clifford Allbutt:—

> I would impress upon the reader the importance of searching for any vicious circle of function, and if any can be found of cutting any link in it whatsoever. The stretching of the sphincter ani in one lady patient of mine restored her to herself after months of nervous restlessness most wearisome both to herself and her friends. In neurotic persons a floating kidney, a disorder of the uterus, a chronic rhinitis, or some other local irregularity, trivial enough perhaps in itself, may close and perpetuate the vicious circle of disorder. The treatment of every case must, therefore, begin with a minute search for any such local factor, and the cure of it must be the first step in the treatment.[26]

To the painstaking physician will fall the honour of unravelling many a Gordian knot in obscure disease and of enabling his patient—

> "Revocare gradum superasque evadere ad auras."

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Reading.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTES ON A CASE OF FAILURE OF THE HEART'S ACTION UNDER CHLOROFORM; RE-INDUCTION OF RHYTHM BY MASSAGE THROUGH THE DIAPHRAGM.

BY T. C. RUTHERFOORD, M.D., B.S. DURH., M.R.C.S. ENG., L.R.C.P. LOND.,

CAPTAIN, I.M.S.; CIVIL SURGEON, BILASPUR, CENTRAL PROVINCES.

THE patient, an otherwise healthy and well-developed native Christian of the labouring class, aged between 30 and 35 years, was admitted to hospital on Jan. 2nd, 1910, for the treatment of hæmorrhoids.

On Jan. 5th, after the usual preparation, the patient was anæsthetised, the sphincters dilated, and the rectum washed out. A Whitehead's operation was then performed in the usual way. The greater part of the operation had been completed—the right half of the mucous membrane having been stitched in position—when the respiration stopped and the patient became cyanosed; he had been breathing badly for a short time before respiration ceased. I thereupon performed artificial respiration for about half a minute by Silvester's method. The pulse was sought for, but none could be detected at either wrist. The heart was, therefore, auscultated with a binaural stethoscope, but no sounds could be heard.

Rapidly washing my hands, I made a longitudinal incision in the mid-line of the belly 4 inches long, the upper end of which was 1 inch below the ensiform cartilage. It was noted that no hæmorrhage occurred from this wound until the recurrence of cardiac contractions. The right hand was inserted palm upwards between the liver and the diaphragm to the left of the falciform ligament of the liver, the left hand being placed over the præcordial region. A watch was held before me, and I then made powerful compression of the heart between the hands at the rate of 60 to the minute. It was noted that not only could no cardiac contraction be felt but that the outlines of the heart itself could not be distinguished with any certainty. After the heart had been

squeezed about one dozen times the whole organ was felt to suddenly harden, following which a strong wave of contraction from above downwards occurred. Massage was immediately discontinued. After about one second another and more powerful contraction occurred, followed by contractions of about equal intensity at regular intervals of probably about one second. The pulse was then felt by Dr. Ramanna and found to be 60 per minute and of quite good pressure and expansion, all things considered.

I then re-washed my hands and rapidly stitched up the abdominal wound with through-and-through linen thread sutures and applied a collodium dressing and bandage. Dr. Ramanna and Dr. Gupta, assistant surgeons, were present throughout the operation. The administration of chloroform was discontinued from the time the respiration ceased, although after suturing the abdominal wound the Whitehead's operation was rapidly finished off. The patient appeared to be quite unconscious until after the dressings had been applied to the anus when he began to groan. An injection of 10 minims of liquor strychninæ was given hypodermically before he was removed to the ward, which operation was conducted with extreme care at about 3 P.M.—i.e., about two hours after the commencement of the anæsthetic. He was placed in a bed, the foot of which was raised about 1 foot and covered with two blankets. Fairly free, though not excessive, hæmorrhage had occurred during the Whitehead's operation before the cessation of respiration, at which time the patient had been under the anæsthetic for rather less than one hour.

I visited the patient again at 5 P.M. and found the skin cold and the pulse 80, and of about the same volume and pressure as at the time of removal from the operating table. He was not completely unconscious as he tried to brush flies from his face and was very restless. I then gave him an intravenous injection of 10 minims of liquor strychninæ and 8 minims of liquor morphinæ, and had hot bottles applied outside the blankets. At 8 P.M. Dr. Ramanna reported that he had completely recovered consciousness. He was given another injection of strychnine and the hot bottles were renewed. I visited him again at 11 P.M. and found the skin warm and moist; the pulse was 80 and of good volume and pressure. He complained of thirst and abdominal pain, and was told to drink as much water as he wanted, but did not drink any. He was perfectly rational.

On Jan. 6th the patient vomited twice in the morning but took and digested some milk. Strychnine was again administered hypodermically. Dr. Ramanna noted a good deal of surgical emphysema of the abdominal and lower thoracic wall, due no doubt to one movement of artificial respiration, made by a well-intentioned assistant just after the belly was opened. I was unable to visit the patient on the 6th.

On Jan. 7th he still complained of pain in the abdominal wound, but the skin in the neighbourhood appeared healthy and there were no signs of peritonitis. The pulse was 72 and of good volume and pressure. He was ordered Mellin's food, rice, and milk.

On Jan. 8th—i.e., on the fourth day from operation—the patient could both sit and stand up and complained of insufficiency of food, for which reason an increase in the quantity of rice administered was ordered. Abdominal pain was much less and the general aspect of the patient was healthy. The anal wound appeared to be nearly healed. The stitches were removed from the anal wound on the tenth day and from the abdominal wound on the fifteenth, the latter having healed by first intention except in one place where the skin edges had not been accurately adjusted. Convalescence was practically afebrile throughout, and the patient was in perfect health when discharged from hospital about the twentieth day after operation.

Remarks.—The case is reported as complete recovery under these circumstances is still rare. The total period of the heart's inaction, though not accurately timed, cannot have been less than one minute nor more than two minutes. The entire absence of suppuration in the abdominal wound and peritoneum, bearing in mind that the skin was not washed and all the other circumstances of the case, is noteworthy.

Bilaspur.

NOTES ON A CASE OF INTESTINAL OBSTRUCTION DUE TO TWO DISTINCT CAUSES.

BY REGINALD M. MOORE, M.R.C.S. ENG., L.R.C.P. LOND.,
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THE notes of the following case are of interest from the point of view of difficulty in diagnosis and of pathogeny.

The patient, a female, aged 56 years, was admitted to the Westminster Hospital from the Westminster Dispensary with a history of constipation and vomiting for three days. The vomit had become fæcal. On admission the temperature was normal. The abdomen was distended and tympanitic; the patient complained of tenderness on palpation. On examination of the rectum the fingers encountered, high up, a large hard nodulated lump. This mass was quite immoveable, covered by the rectal mucous membrane, and appeared to be outside the wall. The lumen of the gut was occluded. No hernial protrusion was to be found. Within half an hour after her admission an operation was performed by Mr. E. Rock Carling.

Operation.—With the intention of performing colostomy an incision was made in the left iliac region. On opening the peritoneum a quantity of clear fluid escaped, and several coils of greatly distended small intestine protruded in the wound. On passing the hand into the pelvis a mass of the size of a cocoanut was found almost completely filling the cavity. The lump was extracted with difficulty and found to be a subperitoneal fibroid which was attached to the uterus by a long pedicle; the pedicle was ligatured and the fibroid was removed. The uterus was beset with several small subperitoneal fibroids.

The large intestine from the sigmoid upwards was distended, but not to the same degree as the coils of small intestine that first presented in the wound. On tracing the gut from the cæcum upwards a Richter's hernia was found in the right internal inguinal ring. The portion of gut involved was situated at about the junction of the upper with the middle third of the small intestine. The piece of gut which was nipped was of the size of a shilling and was completely gangrenous, while for 5 inches on either side the intestine was paralysed and showed signs of commencing gangrene. In the neighbourhood of the hernia the peritoneal fluid was slightly turbid, and a small quantity of intestinal contents escaped at the seat of constriction. 14 inches of small intestine were resected, the cut ends were sutured, and a lateral anastomosis was made. A drainage tube was placed in the pelvis and the rest of the abdominal incision was closed.

Continuous saline infusion was given per rectum and strychnine and eserine were administered four-hourly. The patient did well until the third day after the operation, when peritonitis set in, and she died the same evening.

Necropsy.—Only a limited post-mortem examination was permitted. There was acute general peritonitis. The resection was situated six feet from the pylorus; there was no leakage at the site of the anastomosis, but the flow of water through the artificial opening was rather slow. The gut above and the stomach were very distended. Death was due to septicæmia.

Remarks.—The hernial sac was presumably of long standing; there is no evidence to show conclusively how long it had been occupied by the gut. Probably the course of events was as follows. Congestion or œdema of the fibroid in the pelvis compressed the rectum and pelvic colon until complete obstruction occurred; this led to distension, first of the large intestine and subsequently of the small intestine as far as the Richter's hernia; here the increase in size caused the invaginated gut to become strangulated and so caused a complete obstruction of the small intestine through paralysis of its wall and precipitated the vomiting which eventually became fæcal. Such a condition was practically impossible to diagnose before laparotomy, as there was no sign of a hernia externally; moreover, the pelvic condition afforded an explanation of the symptoms.

The only alternative to anastomosis was the insertion of Paul's tubes beyond the limits of the gangrenous area, but considering the site—namely, high up in the small intestine

—it was judged that immediate anastomosis gave the patient the better chance of recovery.

I wish to thank Mr. Rock Carling for permission to publish this case.

A CASE OF FATAL HÆMOPTYSIS IN CHILDHOOD.

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THE patient, a girl, aged 3 years, was brought to hospital on account of having "a weak chest" and suffering from "worms," and was admitted. She had had no previous serious illnesses but had "always had a delicate chest." No family history of tuberculosis could be obtained. Worms had been noticed in the child's stools three weeks prior to admission, and there had been a falling off in her appetite during the same period. She had also suffered from a slight cough. On the day before she was taken to the hospital she had vomited.

On admission the patient was pallid and emaciated. Her temperature was 100° F. The movements of her chest were poor and the rate of breathing was unduly rapid, but the alæ nasi were not working. Her lips were slightly cyanosed. Percussion resonance was impaired on the left side. The breath sounds were harsh and, over the left lung, almost of a tubular character in places. Medium râles were audible all over the chest. The apex beat of the heart was in the sixth space 1 inch outside the nipple line. The heart sounds were feeble and irregular. The abdomen was distended and more resistant than normal.

The patient's general condition showed some slight improvement at the end of three days, during which time her temperature was of a very irregular type, varying between 99·2° and 101·8°. On the fourth day, while sitting up in bed, she had a sudden profuse hæmoptysis which proved immediately fatal.

Necropsy.—There was widespread tuberculosis affecting the glands of the abdomen and thorax, mostly of a chronic caseating type. The mesenteric glands were all large, some attaining to the size of a pigeon's egg and showing yellow caseation on section. The glands around the head of the pancreas and some in the mesocolon and the hilum of the spleen were in a similar condition, while all the mediastinal glands were affected, especially those at the tracheal bifurcation. Ulcers with tubercles were seen through the wall of the ileum, but there were none in the stomach or bladder. There was no peritonitis, though tubercles were scattered over the liver and spleen.

The pleura was a little adherent on the left side. There were universal pleuro-pericardial and pericardial adhesions, and on separating these numerous caseating tubercles were exposed. The left lung was the seat of diffuse tuberculous broncho-pneumonia, and in the lower lobe there was a cavity of about the size of a golf ball containing blood. The bronchi and trachea were filled with blood, and the hæmorrhage had extended to the stomach which was occupied by clot. In the right lung were small scattered tubercles. There was but little hypertrophy of the heart, and the endocardium was apparently normal. The larynx also was normal. On the right cerebral hemisphere internally were several patches of yellowish tubercle, and there was one in the white matter beneath the left island of Reil. The histological appearances were confirmatory of tuberculosis.

Remarks.—The most striking features of this case undoubtedly are that the immediate cause of death was a sudden profuse hæmoptysis and that this was the first and only attack thereof. Hæmoptysis, due to phthisis, is uncommon in children of such tender age and is very rarely fatal. Cavitation appears not to be very unusual in children, but difficult to recognise clinically. On this account perhaps it was formerly thought to be of less frequent occurrence than is actually the case. The presence of a cavity was not diagnosed in this instance. Cavities are usually small and of recent origin; this one was, comparatively speaking, of large size.

I am indebted to Dr. W. Murrell for permission to publish this case and to Dr. R. G. Hebb for access to pathological notes.

Headcorn, Kent.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

SECTION OF BALNEOLOGY AND CLIMATOLOGY.

Arthritis Deformans.—Climate of Egypt and North Africa and its Influence on Disease.

A MEETING of this section was held on April 20th.

The adjourned discussion on Arthritis Deformans, which was introduced at the preceding meeting on March 9th by Dr. R. LLEWELLYN JONES of Bath, was reopened by Dr. ARCHIBALD E. GARROD and Dr. P. W. LATHAM.

Dr. GARROD spoke in support of the view advocated by Dr. Jones in his opening paper,[1] that under the name of arthritis deformans we are in the habit of including several distinct morbid conditions, distinct alike in their pathological features, clinical course, and causation. He believed that the classification followed by Dr. Jones was as good a one as can be put forward at the present time. He devoted the greater part of his remarks to a discussion of the distinctive features of rheumatoid arthritis and osteo-arthritis respectively—features which are manifested on clinical examination, in radiograms, and at post-mortem examinations. It was pointed out that apart from the characters of the articular lesions there were conspicuous differences in the more widespread constitutional disturbances associated with the two diseases. Dr. Garrod maintained that osteo-arthritis could not be regarded as merely the later stage of rheumatoid arthritis; that since either disease was met with at all ages it could not be assumed that the distinctive features were due to the age of the sufferer, and he further maintained that in cases in which articular lesions of both kinds were simultaneously observed in the same patient careful inquiry afforded evidence that the two diseases were running concurrently. In conclusion, he pointed out that it was of much practical importance that the question of the identity or otherwise of osteo- and rheumatoid arthritis should be settled, since upon the answer to it would depend not only diagnosis but also prognosis and the treatment employed.—Dr. LATHAM referred to the theory which he had advanced in THE LANCET in 1901 (Vol. I., p. 998)—that rheumatoid arthritis was due to irritative and destructive lesions located in the spinal cord, and specially in the cervical and lumbar enlargements. He suggested that these lesions were due to irritative impulses starting either in the course of the afferent fibres or in the brain itself. Arguing from this theory, he claimed that treatment should be directed to the abatement of the spinal mischief, and that probably this could be most effectively done (the exciting cause being removed) by cupping or blistering the spine.—Mr. WILLIAM ARMSTRONG (Buxton) considered that if a specific bacillus originated the disease, vaccines and serums which had been used would have shown some definite results, whereas, so far as he could learn, they had proved inert. He strongly supported the view laid down by Dr. Latham—viz., that with the exception of gonorrhœal, strumous, and direct septic arthritis, all cases of this trouble were connected with defective nerve nutrition of the joints: that the nerve centres were apt to be disturbed by various reflex sources of irritation, such as gastro-intestinal toxins, utero-ovarian disturbances; oral, nasal, and pharyngeal irritation; and local traumatic conditions. Judged by clinical results he found this theory worked out well, for when the sources of reflex irritation were sought for and dealt with, and when counter irritation at each side of the spinal joint centres was steadily and systematically carried out, the most gratifying results had been obtained in a large number of cases. He found that the drastic treatment advocated by Dr. Latham was badly borne by many patients, so he now applied the electric cautery after a preliminary anæsthetic ionisation with guaiacol and cocaine, which made the application of the cautery almost, if not quite, painless.—Dr. SEPTIMUS P. SUNDERLAND referred to the curious frequency of arthritis deformans in women, as compared with men. He stated that Oliver Sunderland of Bexley believed this frequency was accounted for to a great extent by the

[1] This paper was published in full in THE LANCET, April 9th, p. 997.

fact that women possess a vagina and uterus wherein germs which can produce the disease may often lurk unsuspected and undiscovered; and that when a vaginal, cervical, or uterine lesion coexists the incidence of the disease is favoured. He (Oliver Sunderland) had been led to this belief by the fact that during the past five years he had treated a large number of cases of arthritis deformans in women and claimed improvement in nearly all, and cure in a few, of those cases in which he had found and treated vaginal, cervical, and uterine lesions, and was convinced that in those cases the arthritis was dependent on the vaginal, cervical, or uterine lesions attacked by some unknown microbe. (He had noticed that a large majority of the patients he had treated had very dark hair and dark grey eyes.) He (the speaker) concurred with these views as offering one good reason for the frequency of arthritis deformans in women. They accorded with his own views published in 1893 that gonorrhœal arthritis, contrary to the usually accepted opinion, was more common in women than in men.—Dr. LLEWELLYN JONES (Bath), in his reply, dealt with the various objections brought forward by those who contended that no sharp line could be drawn between rheumatoid arthritis and osteo-arthritis. He said the gist of opposing argument appeared to depend upon the existence of transitional forms whose nature and significance could be more conveniently discussed under two headings: firstly, in regard to the comparatively rare instances in which the lesions of both diseases were to be found overlapping in one and the same individual, examples of which had been reported by McCrae and others. The mere coexistence of the two arthritic affections did not necessarily imply identity, and in his opinion this occasional occurrence did not justify us in regarding them as anything more than instances of the overlapping of two otherwise distinct diseases. Secondly, those cases in which an unusual amount of new bony proliferations developed in joints of rheumatoid arthritis could not be regarded as evidence of the transition of rheumatoid arthritis into osteo-arthritis inasmuch as the osseous outgrowths in the former differed in nature—being inconstant in their presence, inconsiderable in size, and spicule-like in shape. Finally, both these diseases, apart from their articular lesions, possessed each of them a distinctive clinical facies, and in order to prove their transition into each other it would be necessary that a rheumatoid patient should put on the general clinical aspect of an osteo-arthritis—in other words, that the emaciated rheumatoid should assume the appearance of the well-nourished and but too often obese osteo-arthritic. He profoundly hoped that the occurrence of these transitional cases (so-called) would not be permitted to impair their clear definition of the essential distinctness of these two diseases, inasmuch as such confusion must inevitably react unfavourably upon the success of treatment essentially different in both these lamentable maladies.

Dr. H. E. LEIGH CANNEY (Assouan) then read a paper entitled "The Climate of Egypt and North Africa and its Influence on Disease." He said that the chief features of desert air were warmth, extreme dryness imparting an exhilarating effect, great purity, and strong sunlight, wide range of temperature from the hot part of the day to the cool evening, but always constant and never presenting sudden variations. The prejudicial effects of the neighbourhood of cultivation and irrigation in modifying the desert climate were demonstrated, and the advantages of the positions of Assouan and Helouan in this respect were pointed out. The group of resorts close to the Mediterranean, including Algiers, Morocco, Tunis, and Alexandria, were shown to have marine climates, very little under the influence of any desert conditions. The climate of Algiers closely resembled that of Malaga, Sicily, and Southern Greece, all situated on the same latitude, from December to March the weather being that of an English autumn with twice the sunshine and rain, being colder than the Egyptian resorts and less dry than the Riviera. Biskra was on the northern fringe of the Sahara, not far enough inland to escape the influence of the Mediterranean. It had a rainfall resembling Alexandria (from 6 to 8 inches). It was situated in a latitude of 4° north of Alexandria, and therefore some hundreds of miles north of Cairo, its climate being colder than Algiers by 3°, than the northern resorts of Egypt by 7°, and therefore far less advantageous for the treatment of the diseases commonly sent to Egypt, being also less dry. The action of the dryness and warmth of the desert on the various organs was considered, especially in relation to the diseases rheumatoid arthritis, Bright's disease, asthma and pulmonary diseases, phthisis and chronic bronchitis, cases of mental strain associated with gout and arterio-sclerosis, neuritis, neurasthenia and toxæmias; and it was specially urged that cases of rheumatoid arthritis and persistent albuminuria after various infections should be sent to Egypt as early as possible before serious damage was done. Owing to the excessive dryness of the climate the rate of cooling became too rapid in the desert after exercise unless special precautions were taken, and unless this was strictly attended to serious harm was done. Many of the illnesses so much benefited by the Egyptian climate, especially the pulmonary and renal cases, were best treated in hotels, and should travel up the Nile by train rather than steamers or dahabeahs. The northern resorts in Egypt, near Cairo, Mena House, and Helouan were considered not warm enough in winter, especially for part of December, January, and February, to obtain the best results in rheumatoid arthritis, many pulmonary and renal cases. Assouan was the driest health resort in the world, 28·2 per cent. drier than Mena, 14·6 than Helouan, and 11·3 than Luxor; and this added a great bracing quality to the climate. The best time to arrive in Egypt was early in November, staying at Mena or Helouan, and not in Cairo, and then if it has been considered that special warmth and dryness are desirable, they must be sought in Upper Egypt after the middle of November and until the middle or end of March, when the Northern resorts are available until the end of April or into May.—Dr. T. F. GARDNER (Bournemouth) proposed a vote of thanks to Dr. Canney for his paper, and the PRESIDENT expressed great regret that time did not permit of a full discussion of so interesting and important a paper.

SECTION FOR THE STUDY OF DISEASE IN CHILDREN.

Exhibition of Cases.

A MEETING of this section was held on April 22nd, Mr. W. MILNER BURGESS being in the chair.

Dr. ROBERT HUTCHISON exhibited three cases of Oxycephaly. The children were aged respectively 1, 5, and 4 years. They all showed the typical oxycephalic head. Two had exophthalmos, while the other had the eyes wide apart and divergent. All three showed congenital deformity of the fingers.—The cases were discussed by Dr. H. MORLEY FLETCHER, who gave it as his opinion that the condition was due to a developmental defect, and not secondary to an abnormality of the brain.—Dr. G. A. SUTHERLAND agreed with this view of the cases and Dr. F. PARKES WEBER also spoke.—Dr. HUTCHISON, in replying, said that he also believed the condition to be due to bone maldevelopment rather than to a brain condition.

Dr. HUTCHISON also showed a case of Speech Defect in a child aged 7½ years. The child had never talked, but there was reason to believe that the child was not a deaf mute, but could hear to some extent.—This case was discussed by Dr. G. E. SHUTTLEWORTH and Dr. FREDERICK LANGMEAD.

Dr. LANGMEAD exhibited a case of Congenital Scoliosis. The patient was a girl, aged 10 months, who had a sharp bend to the left in the dorsi-lumbar region of the spine. A skiagram showed this to be due to an additional wedge-shaped bone interposed between the last dorsal and first lumbar vertebræ of congenital origin.

Dr. LANGMEAD also showed a baby with Blue Patches on the Buttocks and Lumbar Region. He pointed out that this pigmentation was a racial characteristic in Japanese and half-caste babies. There was some doubt as to the nationality of the child's grandfather.—The case was discussed by Dr. G. PERNET, Dr. SUTHERLAND, and Dr. MORLEY FLETCHER.

Dr. R. H. MILLER showed a case of Juvenile General Paralysis with loss of Knee-jerk. The patient was a boy, aged 14 years, who exhibited the characteristic symptoms. There were no signs of inherited syphilis, but a positive serum reaction had been obtained.

Dr. MILLER also showed a case of Lymphadenoma starting at the twenty-fifth month. The child was aged 3 years. Six months previously a gland, which on microscopical examination appeared to be lymphadenomatous, had

been removed from the neck. There had been a steady increase in the size of the glands. The white cells in the blood numbered 6800 and showed a slight excess of lymphocytes.—Dr. HUTCHISON discussed the case.—Dr. SUTHERLAND pointed out the great difficulty of diagnosing between this condition and tuberculosis.—Dr. F. J. POYNTON stated that cases of congenital syphilis were sometimes mistaken for lymphadenoma.

Dr. L. G. PARSONS showed a case of Congenital Acholuric Jaundice. The patient, a boy aged 8 years, had been yellow from birth. There was no other case of jaundice in the family and no specific history. The spleen was uniformly enlarged. The temperature was 100° F. and the blood count showed marked anæmia. Hæmoglobin 23 per cent.—Dr. POYNTON and Dr. PARKES WEBER discussed the case.

Dr. PARSONS also showed a case of Inherited Syphilis.

Mr. J. HOWELL EVANS showed a case of Sarcoma of the Right Kidney in an infant.

Dr. LANGMEAD read a paper on 80 Consecutive Cases of Wasting Infants Fed on Undiluted Citrated Milk.—Dr. E. I. SPRIGGS, Dr. POYNTON, Dr. H. R. CARTER, and Dr. MILLER discussed the paper.

ODONTOLOGICAL SECTION.

Odontoceles.—Suppuration in the Maxilla.—Neuralgia due to Impacted Lower Wisdom Teeth.—Exhibition of Cases.

A MEETING of this section was held on April 25th, Mr. WILLIAM HERN, the President, being in the chair.

Mr. A. HOPEWELL-SMITH read a paper entitled "Two Odontoceles and Some Other Cysts." He described two remarkable and unique cases of malformation of the teeth which had been retained, unerupted, in the jaws in one case of a man aged 31 years, in the other of a medical man aged 41 years. These had given risen to unilocular cystic tumours of the jaws, which, differing from anything previously observed and recorded by pathologists, had, in one instance, been diagnosed as a myeloid sarcoma of the superior maxilla. Neither could be classified as examples of dentigerous cysts or follicular odontomes, and Mr. Hopewell-Smith therefore proposed for them the new terms of sub-capsular and extra-capsular odontoceles respectively. One specimen showed absence of portions of the crown of a tooth, the other additions to its crown, in the form of a calcified capsule—the dental sac or follicle. Epithelium lined the walls of both cysts. Incidentally it was pointed out that the gum margins near the necks of the teeth are freely supplied with mucous glands on the *inner* palatal aspect, and that they are absent over the *external* surface of the alveolar processes. The life-history of the dental follicle, or capsule—a more scientific term—was briefly narrated and the opinion expressed that the contents of dentigerous cysts owe their origin to the breaking down of the stellate reticulum cells of the enamel organ. The paper was fully illustrated by means of pathological preparations, lantern slides, microscopical slides, diagrams, and blackboard drawings.

Mr. C. SCHELLING gave a casual communication on Two Cases of Suppuration in the Maxilla and a Case of Neuralgia due to Impacted Lower Wisdom Teeth.

Mr. HERBERT TILLEY showed Two Cases of Suppurating Dental Cysts Invading the Antrum.

Mr. W. RUSHTON exhibited a Case of Painful Attrition.

MEDICAL SOCIETY OF LONDON.

Gastroptosis.

A MEETING of this society was held on April 25th, Dr. SAMUEL WEST being in the chair.

Mr. F. S. EVE read a paper on the Surgical Treatment of Gastroptosis, being an analysis of a series of 20 cases, with special reference to the results of operative treatment. He said that the symptoms *associated with* gastroptosis were those common to several other functional and organic affections of the stomach. Hence, the diagnosis rested on physical examination and on a process of exclusion, the culminating point of which was in many cases an exploratory laparotomy. The patient suffered with severe chronic dyspepsia, often of long standing. In two of his cases the symptoms had lasted 20 years, in one for 12, and in two for 10. There were flatulent distension, a sense of fulness, and pain after food referred to the epigastrium, and sometimes radiating under the right costal margin and to the scapula. The pain came on at various periods after food, usually early, but occasionally after a longer period, even up to three or four hours. Vomiting was often present, and in exceptional cases was incessant. The symptoms might be more or less persistent; but commonly the sufferers were subject to periodic attacks or exacerbations of the symptoms which led to their admission to hospital on several separate occasions. The pain was prone to be made worse by standing or walking about after a meal. During the exacerbations there was in many cases distinct superficial and deep tenderness over the epigastrium. The diet was usually by force of circumstances restricted. Meat was often avoided, and the worst cases restricted themselves to milk, eggs, and such light diet in small quantities. Hæmatemesis was present frequently; it existed in 9, and perhaps 10, out of his 20 cases. In 7 of these it was considerable in amount—a teacupful or more; exceptionally, it was frequent and small in quantity. The symptoms associated with gastroptosis were in many instances so like those of gastric ulcer that the latter could only be excluded by a laparotomy. Allusion had been made to the frequency of hæmatemesis—i.e., in nearly 50 per cent. of his cases. Pain and vomiting after food, superficial and deep tenderness over the epigastrium, and hyperæsthesia of the skin to the right of the lower dorsal spines *might* all be present. A most important point of distinction was that the acidity in gastroptosis was rarely increased, and was sometimes low. Free hydrochloric acid was, in one or two cases of long standing, entirely absent. When a youngish woman was referred to him with suspected gastric ulcer whose acidity was at or below normal he always examined carefully for gastroptosis, especially if the lower part of the thorax was elongated and narrow. Those cases formed a distinct type. The results of gastropexy were as follows: Of the 11 cases two had only recently been operated on, but were relieved of their symptoms while in the hospital. One was quite well 12 months after the operation, but must be excluded because calculi were removed from the common bile-duct at the same time that gastropexy was performed, and the symptoms were probably largely due to cholelithiasis. Another patient became melancholic shortly after the operation, was sent to an asylum, and had since been lost sight of. That left seven cases. Of these, six were completely cured; three of them reported themselves between one to four years after the operation, and three between three and nine months afterwards. The remaining patient, operated on 13 months ago, was a neurasthenic maid-servant aged 32. She was quite well for some time after the operation, but returned to hospital at the end of a year owing to occasional vomiting and return of pain; but her symptoms entirely subsided while she was in the hospital, and she was able to take ordinary food. Before the operation the iodipin reaction was obtained in three hours, indicating that the motility of the stomach had improved. The results of gastro-jejunostomy were as follows: Seven cases were treated by this method and they were mostly his earlier ones. In three of them there was marked dilatation of the stomach in addition to gastroptosis and two of these had also hæmatemesis. In three other cases hæmatemesis was a conspicuous symptom. Three of the patients were definitely neurasthenics; but gastro-jejunostomy was performed because in one case there was distinct dilatation and in the two others incessant vomiting with hæmatemesis. Of the seven cases four were cured; of these two reported themselves 20 months and seven years respectively after the operation and two eight and three months respectively. The three remaining cases (all neurasthenics) were slightly improved. None of the cases with hæmatemesis had any recurrence. In fact he had not yet seen recurrence of hæmatemesis after gastro-jejunostomy. The stoma of the gastro-jejunostomy probably acted as a safety-valve and prevented the distension of the stomach, which was one of the chief causes of the hæmorrhage. The two cases treated by Duret's method were improved at first, but ultimately relapsed more or less completely. In one of them gastropexy was subsequently performed with excellent results. Mr. Eve's conclusions were that an operation on Beyea's plan, as modified by him, was indicated in the majority of cases of gastropexy which were not amenable to medical treatment. Gastro-jejunostomy should be avoided,

but might be necessary in certain cases of gastroptosis with dilatation and atony and for the relief of hæmatemesis.

Dr. ROBERT HUTCHISON read a paper on the Principles of Treatment in Gastroptosis. He said that the first point upon which it was necessary to lay emphasis was that gastroptosis was not really in itself a disease and in many cases called for no special treatment. It must have happened to everyone present to discover the existence or displacement of the stomach in the course of the routine examination of a patient who had made no complaint of gastric symptoms. It would be found, he thought, in such cases that the dislocation of the stomach had been induced, so to speak, accidentally, most often, perhaps, as a result of weakening of the abdominal wall in consequence of repeated child-bearing. It was true that in a case of that sort there might be a greater or less degree of "pendulous belly," which might cause some mechanical inconvenience, but apart from that, and assuming the patient to be otherwise vigorous, there need be no symptoms which could be directly referred to the abdominal organs. In these cases gastroptosis demanded no special treatment, but he believed he might go further and state that in no circumstances did mere displacement of the stomach, considered by itself, make such demands and that it was only because of its tendency to be associated with two other morbid conditions that gastroptosis came within the cognisance of the physician at all. Those morbid conditions were—(1) a general state of neurasthenia, and (2) functional disorder of the stomach and intestines. In the treatment of the neurasthenia which accompanied, if it did not underlie, most cases of gastroptosis, their most effective means was a well-planned rest cure. Their object must be to improve nutrition or, in the words of Weir Mitchell, to make fat and blood. At the outset one *a priori* objection to that plan must be faced. To improve nutrition the patient must be overfed, but would his debilitated stomach permit of that being done? Was there not a danger of over-distending it and of increasing any atonic dilatation which might be present? In practice he did not think that objection held. Provided the feeds were not too large and the food suitably selected and prepared, such a result need not be feared, and as the general "tone" of the patient improved one found that the digestive power improved *pari passu*. Furthermore, one found that patients with gastroptosis who suffered great digestive discomfort whilst they were going about lost most of their symptoms so soon as the recumbent position was adopted, and had no difficulty in managing a full diet. *Per contra*, there was, he was sure, a real danger in cutting down the diet in those cases in order to quiet the complaints of the stomach. By so doing one merely suppressed a symptom whilst really aggravating the complaint, for the consequence of such a course was that the nutrition became still further impaired and the neurasthenic state exaggerated. Here, as always, in prescribing dietetic rules one must not sacrifice the whole body for the sake of any one member of it, or, in other words, one must diet the patient and not the disease. Of the accessory measures in the rest cure—massage and electricity—most importance was to be attached to massage. It had a threefold use. It promoted general nutrition and the laying on of fat; it improved gastric and intestinal tone and it strengthened the abdominal wall, all of which were cardinal objects of treatment. The help of electricity could, in his judgment, be dispensed with, but to that point he should return again. Concerning the use of drugs in combating the neurasthenic state there was little to say; the bromides were perhaps the most generally useful and would usually be called for at some period in the case. Strychnine, though often ordered, was frequently injurious. Of such agents as the hypophosphites and glycerophosphates he had a low opinion. Iron might be helpful if there was pronounced anæmia, but that was an exceptional occurrence, and the state of the digestion would not always permit of its exhibition. In such cases arsenic might come to their assistance. In ameliorating the general asthenic condition of the patient by a rest cure they did much to correct any loss of tone or motility in the stomach. There was experimental evidence also that massage of the stomach stimulated its movements and so aided its motility. As to the value of electrical means he was not convinced. He believed that there was no satisfactory evidence that the application of electricity to the abdominal surface had any effect upon the stomach at all, but if any form of it was to be tried the sinusoidal current was probably that which offered the best chance of success. Drugs also, contrary to what might be expected, were probably of little help. They stood much in need of some drug which would act upon the musculature of the stomach in the same specific way as digitalis did upon that of the heart or ergot upon that of the uterus. Physostigmine was, perhaps, the one from which on pharmacological grounds most might be expected in that direction, but its use was open to practical objections and it had never been generally adopted. Strychnine might possibly increase the tone of the stomach, as it did that of most unstriped muscle, but the results it yielded were not brilliant and its action upon the nervous system was sometimes disadvantageous. He was not sure that aloes had not a stimulating effect upon the movements of the stomach as it had upon those of the colon. He had an impression that it had, but it was difficult to adduce any convincing clinical evidence of such action, and he was not aware whether it had been tested experimentally. The means to be adopted in the correction of disorders of secretion in cases of gastroptosis differed in no respect from those in use in ordinary cases of functional dyspepsia. Over-secretion was the commonest fault, and was to be met by the free administration of fats and by the judicious use of bismuth and the earthy carbonates. The bromides were also of service here, as they seemed to deaden the reflex excitability of the stomach. In the treatment of hyperæsthesia of the displaced stomach there was no measure equal in value to the use of local moist heat in the form of poultices or fomentations, and whenever there was general epigastric tenderness such means might be usefully employed during the first week of the rest cure. Gastric sedatives such as bismuth, bromides, chloroform, and even, in extreme cases, opium were also of service. Should the disorder of function have induced or be complicated by some degree of gastritis, as evidenced by a foul tongue, impairment of appetite, and nausea, it was advisable before treating the underlying disorder of secretion or motility to allay the catarrhal symptoms. The diet in such circumstances should consist of milk only, and judicious use should be made of those well-tried drugs—mercury and rhubarb. Unquestionably patients with enteroptosis derived great comfort from any effective means of supporting the abdominal viscera, but it was very doubtful whether that was the result of any actual pushing up of the displaced organs. Such support gave relief from those feelings of sinking, emptiness, and exhaustion which were amongst the most bitter complaints of the gastroptotic, but those sensations were probably due to lessened intra-abdominal tension and a tendency to pooling of the blood in the splanchnic area when the erect position was assumed. The relief of those symptoms was, none the less, a legitimate object of treatment, and hence the provision of some form of abdominal support had always to be considered. Now, it had been truly remarked that the best belt was a firm abdominal wall, and hence their efforts should be directed to restoring the tone of the abdominal wall and to thickening it by the deposition of a substantial layer of subcutaneous and extraperitoneal fat. The rest cure, if successful, should achieve the second of those objects, especially in men, in whom the deposition of fat in the abdomen seemed to take place more easily than in women. By increasing the amount of "packing" in the abdominal cavity intra-abdominal tension was increased and the tendency to undue mobility of the viscera restrained. As regards the development of the abdominal muscles, reliance must be placed upon massage and the practice of "abdominal exercises." He thought it would be generally agreed that the ideal abdominal belt remained yet to be invented. It was simple enough to point out what was wanted—the exercise of pressure from the lower part of the abdomen upwards and somewhat backwards—but the difficulty was to carry that principle into practice. He concluded by enumerating three things which he thought should not be done: First, patients with gastroptosis should not be over-dieted—which, of course, was just the reverse of being over-fed; secondly, their stomachs should not be washed out; and thirdly, they should not be operated upon.

Dr. R. H. SCANES SPICER discussed the subject of gastroptosis from the point of view of its causation through the action of the diaphragm not being centrifugal. His method of treating the condition was by means of physical culture. He declared that by assuming the correct position with a

straight spine the diaphragm would act centrifugally, resulting in rectification of the condition so as to render operative measures unnecessary.

Dr. A. F. HERTZ emphasised the importance of distinguish ing between two tpyes of gastroptosis, one which occurred as part of general visceroptosis and the other consisting of remarkable cases in which gastroptosis alone was present.

Dr. F. PARKES WEBER pointed out that in orthostatic albuminuria and in gastroptosis there was one condition which was common to the two abnormal states, and that was that in both instances when the patients lay down the symptoms disappeared or became very much diminished. He would like to have the matter investigated.

Dr. WEST said that the utility of washing out the stomach in cases of gastroptosis was denied, but there was no doubt that these cases were benefited by removing accumulations of fluid from the stomach so as to keep that organ empty.

The meeting concluded after Mr. EVE and Dr. HUTCHISON had replied.

HARVEIAN SOCIETY OF LONDON.

Surgeons, some Mortals, and the Climacteric.—Treatment of Indigestion.

A MEETING of this society was held on April 14th, Dr. M. HANDFIELD-JONES, the President, being in the chair.

Dr. LEONARD WILLIAMS read a paper on Surgeons, some Mortals, and the Climacteric. As an excuse for the "mere physician" dealing with the subject of the climacteric Dr. Williams indulged in some genial banter on the prominent position now occupied by operative surgery. At dinner parties personal experiences of the guests formed the chief topic of conversation. The text-books were given up to the subject. In works on gynæcology a subject like the climacteric was crowded out by details of operative surgery. Finding no place in purely medical text-books the menopause had become a "veritable maiden aunt of practice." After a brief description of the disturbances usually observed at this epoch, he called attention to three causes to which some of them might be due—eye strain, disturbances of blood pressure, and thyroid inadequacy. The first, of course, was a common condition at this time of life, due to slight errors of refraction which were frequently overlooked but should always be sought for; even when recognised these minor errors were often minimised, oculists themselves not realising their important influence on the general health, and patients generally objecting to beginning glasses. These objections should be tactfully overridden and, wherever present, errors of refraction corrected. Vaso-motor phenomena might be said to be normal to the climacteric. The more common hypertension was relieved by the hæmorrhages so frequently present, and these should not be unduly repressed. The rarer hypotension, the symptoms associated with which he described, was best treated by ergot, strychnine, and pituitary extract. But its presence should first be demonstrated by a reliable manometer lest disaster befall. Speaking of thyroid inefficiency, he described a group of symptoms or signs frequently present at this age period which, while falling a long way short of myxœdema, to his mind indicated a certain degree of deficiency of the secretion. When this sub-thyroidic syndrome was present he prescribed thyroid gland extract with much benefit, but not in the usual doses; half a grain twice a day, possibly increased, sufficed. He mentioned ichthyol as one other drug which he had quite empirically learnt to place reliance on in the treatment of the subjective symptoms of the menopause generally.—The paper was discussed by Mr. W. H. CLAYTON-GREENE and Mr. ERNEST CLARKE.—The PRESIDENT remarked on the frequency with which the menopause was held responsible for symptoms. He supported blood-letting in suitable cases. He did not agree that thyroid inefficiency was of importance as a cause of symptoms during the climacteric, and pointed out that in these days numbers of women treated increasing obesity with thyroid extract and yet suffered from the usual symptoms at the change of life. He considered that ichthyol acted as an intestinal antiseptic.—Dr. LEONARD WILLIAMS replied.

Dr. E. I. SPRIGGS read a short paper upon the Treatment of Indigestion. He reviewed the functions of the stomach which might be in abeyance or exaggerated, and pointed out that unless an exact diagnosis was made the appropriate treatment could not be applied with certainty. Certain forms of indigestion might often be recognised from the symptoms without an examination of the stomach contents, such as hypersecretion of gastric juice, and in some cases motor insufficiency. From a review, however, of 425 cases of dyspepsia, of which he had taken notes, it was concluded that in the majority of these—namely, 364—an exact diagnosis was not to be made from the symptoms and physical examination of the stomach alone. The physician might form a definite view, but analysis of the stomach contents would show that this view was often wrong. Nevertheless, in a large proportion treatment had been successfully applied. He much preferred, whenever possible, to make an exact diagnosis by an examination of the contents of the stomach or of vomited matter. Although the procedure of withdrawing material from the stomach was an extremely brief one, nevertheless many patients, and not unnaturally, objected to the discomfort of passing a tube. Treatment founded upon experience might be applied first in these, and would often be unsuccessful. The earliest step was to remove, when possible, the circumstances causing the dyspepsia. These were discussed in the following order—overwork, irregular meals, insufficient or septic teeth, errors in diet, alcohol, tobacco, exposure to cold, and anxiety leading to neurasthenia. A large number of cases might be relieved by dealing with the cause. Of medicines, the review of the notes of the 425 cases above mentioned, in which a large number of medicines had been used, showed that benefit had resulted most frequently from one of two kinds of medicines—namely, alkali and a carminative, such as ginger, an hour or an hour and a half after a meal, or when the discomfort came on; or bismuth carbonate in doses of half a drachm or more before meals. If success did not follow simple measures the stomach contents should be obtained after a test meal. The microscopical and chemical examination of this material was referred to, and it was detailed how a diagnosis of such conditions as chronic gastritis, hypersecretion, or motor insufficiency could be made. The course of treatment was then outlined. Dr. Spriggs concluded by pointing out again how much more likely it was that treatment could be successfully directed when an accurate knowledge of the cause of the symptoms was obtained.—Mr. E. PARKER YOUNG was disappointed at the paucity of remedies mentioned by Dr. Spriggs and spoke of the value of charcoal and creosote.—Dr. E. C. YOUNG thought that the unpleasantness of passing the stomach tube was exaggerated. He considered the best time to wash out a dilated stomach was before the evening meal. He approved of the plan of giving fluids an hour before meals and of giving proteid food in cases of hyperacidity.—Dr. LEONARD WILLIAMS did not consider that tobacco was a cause of dyspepsia. He thought nowadays there was much nonsense talked about diet, and the stomach was pampered. He mentioned eye-strain and nasal obstruction as additional causes of dyspepsia.—Dr. SPRIGGS replied.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on April 20th, Dr. A. Fulton, the President, being in the chair.—Mr. R. G. Hogarth showed a boy admitted three weeks ago into the hospital with symptoms of Internal Hæmorrhage. At the operation the spleen was found to be ruptured and was removed. The boy made a splendid recovery.—Mr. Kenneth Black showed a case of Wry-neck successfully treated by removing the sternal head of the sterno-mastoid and uniting this to the clavicular portion.—Dr. J. A. Robinson, in opening a discussion on "Is Craniotomy Justifiable?" reviewed the history of instrumental delivery. Owing to the extremely high mortality with which Cæsarean section used to be attended, craniotomy became the operation of choice, and some authorities declared that it was nearly as safe as normal labour. However, modern methods had succeeded in reducing the mortality of Cæsarean section to 6 per cent. Its advantages were: its ease; the fact that a healthy, full-term child was presented to the mother; the mother could, if necessary, be sterilised; and altogether it provided the best results for the mother. Perforation should never be performed on a living child. With a conjugate of two and three-quarter inches symphysiotomy or pubiotomy provided alternate methods. The

writer quoted 20 cases of Cæsarean section with three deaths, but he pointed out that the fatal cases occurred in private practice and dirty and septic surroundings. He urged, therefore, that these cases should be diagnosed early and removed to some hospital or institution. In his opinion craniotomy was a reflection on the management of difficult labour.—Dr. A. C. Reid agreed that when the child was living and circumstances were favourable Cæsarean section was the operation of choice. But as a Poor-law medical officer he was often called in by midwives when labour had already lasted 24 hours and the woman was exhausted. Prompt removal to hospital in such cases was difficult, and the general practitioner was forced to rely on craniotomy. His own experience was not encouraging, as he had had three deaths in five cases, two from ruptured uterus and one from shock. Still, he held that craniotomy was justifiable where a living child was impassable and considered it to be the operation of election (1) where the child was non-viable and the mother's condition was urgent; (2) in the case of monstrosities; and (3) where the fœtus was exceptionally large, and especially if it was dead. He urged that homes should be established where difficult labours could be properly watched.

MEDICO-CHIRURGICAL SOCIETY OF GLASGOW.—A meeting of this society was held on April 15th, Dr. William Grant being in the chair.—Dr. J. H. Nicoll, in showing two infants recently treated by operation for Congenital Hypertrophic Stenosis of the Pylorus, pointed out that this condition is comparatively common. In its earlier stages its treatment is necessarily dietetic, and such treatment cures a number of the slighter cases, though it is probable that amongst the recorded cures have been included cases in which the diagnosis has been doubtful. For cases of more severe degree dietetic treatment is useless, and its undue prolongation destroys the chances of operative success. For well-marked hypertrophic stenosis operative treatment is necessary, and, undertaken before exhaustion or emaciation has become pronounced, gives satisfactory results.—Dr. W. T. Ritchie and Dr. J. M. Cowan gave a lantern demonstration on "Coupled Rhythms of the Heart" (pulsus bigeminus); and Dr. Cowan showed a convenient form of Polygraph.—Dr. A. J. Ballantyne showed illustrations of two cases of Foreign Body in the Interior of the Eye. The cases were almost identical in their essential features, but one was quite recent, while the other had received his injury 15 years ago. In the former there was a small corneal cicatrix and a perforation of the iris below the pupil. When first seen a few days after the accident there was considerable opacity of the lens. This rapidly cleared up, and a few days later the foreign body, probably a chip of metal, could be seen impacted in the retina. The object was also detected by radiography, but the large electromagnet failed to move it. The older case presented a similar perforation of the iris, a small amount of opacity of the lens, and a foreign body in the same situation as in the other case, but in spite of clear transparent media the vision was very defective. It was considered that the deterioration of vision was due to the chemical action of the metallic particle on the retinal elements, and that the condition of the older case might be taken as an indication of the probable course of events in the more recent one.

ROYAL MICROSCOPICAL SOCIETY.—A meeting of this society was held on April 20th. Mr. F. R. Chopping, assistant in the Clinical Laboratory at the Westminster Hospital, exhibited specimens of bacteriological culture media in dry concentrated form (provisional name "Solmedia"). As they are light and of small bulk, they can be sent by post at cheap rate. They do not deteriorate, have hitherto kept extremely well, and will probably do so for quite a long time; hence they will be invaluable for work in warm climates, especially tropical. The method of using the media, which is quite simple, is as follows: 5 cubic centimetres of water are to be added to a given weight of solmedium in a test-tube; the test-tube is then placed in a water bath for about 30 to 45 minutes, and afterwards allowed to set in the required position. In this way a tube of sterile media is cheaply and easily prepared. Samples of unused "solmedia" culture tubes were exhibited and also cultures of various organisms in various media, as well as uninoculated tubes of media. This method of producing dry concentrated media, which Mr. Chopping has elaborated after about two years' work, may lead to important results.

Reviews and Notices of Books.

A Text-book of Nervous Diseases. By WILLIAM ALDREN TURNER, M.D. Edin., F.R.C.P. Lond., and THOMAS GRAINGER STEWART, M.B. Edin., M.R.C.P. Lond. London: J. and A. Churchill. 1910. Pp. 607. Price 18*s.* net.

THE aim of the authors, as expressed in their preface, has been to provide the practitioner and senior student with a short and practical account of the diseases of the nervous system, based not so much on the model of larger text-books as on the results of their own practice and experience. They have produced a thoroughly sound and serviceable text-book, in which much of proven value from the teaching standpoint has been incorporated. One of the features of the volume is the tables of differential diagnosis, unusually large and complete, whereby the chief symptoms and signs of diagnostic import in various diseases can be seen at a glance and their relative significance appreciated. Throughout the book the authors have steadily adhered to the ideal combination, from the working student's standpoint, of conciseness and accuracy, and they are to be congratulated on the achievement of their purpose. We know of no other text-book of similar size which contains so much matter presented in a readable fashion, embodying the results of wide clinical experience and not a little that we have not found elsewhere.

An introductory chapter on the anatomy and physiology of the nervous system is followed by a scheme for the examination of patients suffering from nervous disease. The special senses, cranial and peripheral nerves, receive suitable consideration; then comes a large division of the volume devoted to the diseases of the brain. The chapter on intracranial tumours is excellent, and the descriptions of the varying factors in their localisation are lucid and well expressed, but a table of differential diagnosis between certain groups might, perhaps, have been furnished. In the chapter on intracranial vascular lesions, which is otherwise good, we can find no adequate reference to the different types of crossed hemiplegia, types that are both of clinical interest and localising importance, and we should like to see this remedied in a subsequent edition. The diseases of the spinal cord are preceded by a sketch of the functions of the normal cord and are handled methodically and minutely. Under the heading of general diseases of the nervous system is an excellent account of the varieties of syphilitic and parasyphilitic nervous disease and of disseminated sclerosis, subacute combined degeneration of the spinal cord, and other affections. In the chapter on acute poliomyelitis the statement that "it is known to occur in epidemic form, several well-authenticated instances of which have been recorded," may be a little misleading, in view of the fact that epidemics involving thousands of cases have been raging in various parts of the world in the last few years, and much more is known now than formerly of the nature of the morbific agent. It is a question whether Landry's paralysis is not closely allied to poliomyelitis. The chapters on familial diseases of the nervous system, on hysteria, neurasthenia, psychasthenia, epilepsy, and the tics leave nothing to be desired. The authors regret that the limitation of the size of the book has made necessary the omission of certain disorders usually described in treatises upon the nervous system, such as exophthalmic goitre and acromegaly.

The volume is excellently printed, and its value is enhanced by the inclusion of about 200 admirable clinical and pathological photographs and diagrams. There are some misprints (notably one on p. 151) and the inaccurate rendering

of various proper names might be corrected in a subsequent edition. We think there should be an assured place for such a text-book as the one under review—an up-to-date, compact, and methodical volume in which the needs of the practitioner and student have been kept in mind, and in which they will find trustworthy information that comes, as we have already said, not from a mere abridgement of large treatises, but from a judicious application of personal observation and experience.

Studies in the Psychology of Sex. Vol. VI.: Sex in Relation to Society. By HAVELOCK ELLIS. Philadelphia: F. A. Davis Co. 1910. Pp. 656. Price 83 net.

THOUGH it is impossible to estimate the value of this volume as detached from the five smaller ones of its series, it stands alone among them as a larger study of the subjects to which Mr. Havelock Ellis has devoted his life. In some of his earlier writings the author confined his aspect too carefully to the most advanced modern views of the subject of sex and sexual relations, and was not quite fortunate in the manner of their presentation. The result was to place him in unpleasant opposition to unlearned and unscientific thought and a judicial authority to which that thought appealed. In the case of this volume there is no chance of such an appeal. The physiological and psychical details which have necessarily to be handled are treated gravely and soberly. In a historical survey of this wide field it is impossible to avoid details which could be duplicated in the pages of Aretino or Casanova, but the manner of these writers is sedulously avoided.

The author has very wisely decided upon a wide historical survey of his difficult and delicate theme. In our estimation of social problems we are all guided (a few consciously and the remainder unconsciously) by inherited traditions of the past. To comprehend the ideas of the Western world upon the complex questions of sexual relations, marriage, prostitution, enforced chastity, and similar subjects it is essential to have an adequate grasp of Oriental ideas, of the sentiments of the Greek and Roman world, of the teachings of the early Christian churchmen, and of the revolt against that teaching initiated in Provence and rendered popular throughout Europe during the Renaissance. Questions which vexed Origen and Jerome, questions gravely summarised in the pages of Lecky, are profitably and properly recalled in the work before us. Both the matter under consideration and the plenitude of reference will remind the reader of Robert Burton. The resemblance does not stop there; Mr. Havelock Ellis scarcely commits himself to an opinion, and, like the old senior student of Christ Church, he strings references together which support a general view without any violent bias.

The book begins with a broad, quiet survey of the point at which modern thought has arrived on such questions as sexual education, the enlightenment which should be given to boys and girls on this important matter; this is well handled, and the position maintained can hardly be considered as too pronounced. The chapters which follow on "The Valuation of Sexual Love," "The Function of Chastity," and "The Problem of Sexual Abstinence" are excellent essays in historical survey. Full of information, accurate in detail, and free from any suggestion of offence, they present a synopsis of the study of this aspect of human morals. A large space of over a hundred pages is given to the consideration, from both the historical and psychological standpoint, of prostitution. The inferences drawn from modern evidence are, on the whole, sound; the author recognises that information gathered by sentimental enthusiasts from prostitutes is extremely tainted, and that, speaking broadly, poverty is not the most important cause of prostitution. The conditions which have been recently quoted as existing in certain Russian provinces are probably exceptional.

The matter to which exception might be taken is the chapter on the "Art of Love." It is perhaps undeniable that ardent young husbands are apt to be too hasty and too clumsy in the introduction of their wives to the mysteries of the marriage bed; there has been too much reticence on the part of mothers, and the sudden initiation which had no repulsion for Sophia Western might well create an abiding distaste in the cultivated modern girl. For the husbands of highly sensitive brides some teaching in skill and tact may certainly be useful, but it is doubtful if the refinements in the *ars amandi* detailed in this chapter are desirable for general adoption. If dyspareunia occurs occasionally, as it does, on sentimental grounds, the trouble is limited to a few persons; and a widespread contemplation of methods which we find in the pages of Martial or a re-issue of the eighteenth-century editions of the "De Variis Veneris Schematibus" (with cuts) is not to be tolerated; they must inevitably have engendered an undesirable degree of concupiscence in those who came under the influence of such instruction.

With this reservation these studies can be honestly recommended to the medical world and to serious students of social problems. For the volume is what it affects to be—a series of studies, a grouped epitome of the opinions and observations of recognised authorities. If the author occasionally commits the error of dismissing an argument by the mere quotation of a single contemporary opinion, he makes, on the other hand, little attempt to be dogmatic on his own account. Mr. Havelock Ellis has become a scholar in his peculiar field, and has given the dignity of scholarship to a very delicate and difficult subject, and this is the proper method of treatment.

The Morphia Habit and its Voluntary Renunciation. By OSCAR JENNINGS, M.D. Paris. London: Baillière, Tindall, and Cox. 1909. Pp. 492. Price 7*s.* 6*d.* net.

THE author commences the preface to his book with the astonishing statement that "one medical man out of four is a drug *habitué*, usually a morphinist." On p. 62, in a footnote, appears a somewhat similar, but more guarded, remark—viz.: "It has been said that one medical man out of four is addicted to the habitual use of morphia." Neither statement is correct so far as British medical men are concerned, and no evidence is produced to show that continental practitioners suffer to this extent from drug addiction.

Some 87 pages are devoted to a long description of the treatment of a single case. But though there appears to be unnecessary detail the description is instructive. The physician who undertakes the treatment of a morphia *habitué*, if he wishes to satisfy himself and his patient, must be prepared to be at the beck and call of his patient at all hours and to spend much time over the case. Such cases are consequently, in the generality of instances, more suitable for institutional treatment or as resident patients in the house of a medical practitioner. Dr. Jennings advocates gradual drug reduction and the employment of bicarbonate of soda, preferably in the form of Vichy water, sparteine, and the Turkish bath as the three great therapeutic measures in the treatment of this condition—measures which other authorities have tried and which have been found in many hands to be disappointing. It may be that his firm belief in his "therapeutic triad" so affects his patients that the resultant symptoms due to drug withdrawal are relieved by suggestion; for unless there is a dosage difference it is difficult otherwise to account for the diversity of results and opinion. In this condition, as in many others, the personality of the physician

and his faith in the remedies which he prescribes are factors which must be taken into consideration. Dr. Jennings voices the opinion of the majority of those who have studied and have written on the subject when he states that his general experience is "that there is no one remedy or method, that every case is a special study in itself, and that ..... each case must be treated on its own merits."

The book is written by one who is known to be interested in the subject and to have had much experience therein. Dr. Jennings has an intimate knowledge of the many difficulties which have to be contended against when undertaking the treatment of morphinism, and the fruits of his experience contained in this volume should prove of value to those who are concerned in the management of such cases.

Physiology of the Special Senses. By M. GREENWOOD, jun., M.R.C.S. Eng. London: Edward Arnold. 1910. Pp. 239. Price 8*s.* 6*d.* net.

THIS work is intended to meet the wants of those who are desirous of taking up physiology as a branch of liberal education or with a view of presenting themselves for higher professional examinations, and also for students of psychology who may desire to obtain more information regarding the physiological side of the senses than is usually found in works dealing with psychology. There is no account of the anatomy and histology of the sense organs, save in the chapter on Comparative Physiology of Vision, where a few illustrations taken from Hesse's excellent illustrations of the visual organs in lower animals are given. There are also three rather crude diagrams of otolith organs in jelly-fish which do not harmonise with the other illustrations.

Considering the vast variety of impulses that reach the central nervous system from what are called the special senses, and how differently different physical agents act on bodily structure under varied conditions, the author begins his inquiry by asking whether there are any general formulæ or laws describing some relations between external stimuli and conscious reactions valid for all sense organs. The "formulæ" or "laws" that hold the field are those associated with the names of Johannes Müller (Berlin), E. H. Weber (Leipsic), and Th. Fechner (Leipsic). Müller's "law," the first in point both of time and importance, the "Law of Specific Energy," or "Law of Specific Sense Energy," is not happily phrased. Its import and importance, however, are well understood. There is no rigorous proof of its correctness, but the formula is of real scientific value. Weber's "law" introduces the question of the threshold or liminal value of stimuli. Fechner, accepting Weber's law as true, added a corollary, that the sensation varies as the logarithm of the stimulus. We agree with the author that "the formulation of a quantitative law is hardly justifiable"—i.e., as regards the attempt to measure sensations.

The cutaneous sensations are first dealt with (pp. 8–17). May we suggest that it might be well in the next edition to insert in brackets, so far as regards Weber's experiments on temperature, the equivalent value on the Centigrade scale for water at 29·5° Réaumur? Many readers are not likely to be familiar with the Réaumur scale. Gradually the terms "protopathic" and "epicritic sensibility" of Head and Rivers are finding their way into textbook terms based on Dr. H. Head's work, who voluntarily submitted to section of a nerve in his forearm in order to study in his own person the immediate and remote effects of section of a sensory nerve, as well as the phenomena of recovery of sensibility. With regard to pain the discussion is brief, and most of the problems which arise belong rather to psychology than to the physiology of the sense organs. Short chapters are devoted to taste and smell, and two to the sense of position and movement. In Exner's experiments on homing pigeons it might be well to explain what is meant by "galvanising" them (p. 49). Including a short historical introduction, the physiology of the ears occupies about 20 pages. In "Vision" we are introduced to the German term "Photirzellen." As was to be expected, the greater part is devoted to vision, nearly 130 pages—i.e., more than half of the whole work. There is a short chapter on Historical Theories of Vision, in which the author acknowledges his indebtedness to Beare's "Greek Theories of Elementary Cognition from Alcmæon to Aristotle." The scope of the treatment of the subject can but be indicated by mentioning the chief matters dealt with—e.g., retinal processes; electrical, phototropic, and chemical response; visual adaptation; peripheral vision; recurrent vision; total colour blindness; trichromatic and dichromatic vision; the Young-Helmholtz and Hering theories of colour vision; after-images; simultaneous contrast. The merits and demerits of the respective theories of colour vision are fully discussed. The last chapter is on "Space," including monocular and binocular vision, perception of depth, and stereoscopy. We do not find any reference to the newer classification of sense organs as "receptors."

The work will prove serviceable to those it is intended for. We think the author's advice is good that it would be well to read it in conjunction with Myer's "Text-book of Experimental Psychology," more especially as no attempt is made to bridge the gulf between the worlds of physiology and psychology, but appended to each chapter is a list of papers recommended for further study. We have noted some slips. We find "denteronopes" for "deuteranopes," and on p. 194, should not "white-red" be "white-black," and Zollner should be Zöllner.

LIBRARY TABLE.

Lessons on Elementary Hygiene and Sanitation, with Special Reference to the Tropics. By W. T. PROUT, C.M.G., M.B., C.M. Edin., late P.M.O., Sierra Leone. Second edition. Pp. xx.–159. London: J. and A. Churchill. Price 2*s.* 6*d.* net.—This little work is founded on a series of six lectures given by the author, who is so well known for his good administrative work in Sierra Leone. The author modestly describes it as an elementary textbook, but the reader will find in its pages a very complete guide in most matters relative to the preservation of health in the tropics. The design of the work is excellent. We first have the anatomy and physiology of the body described, and the indications to be deduced from the latter pointed out. The causes of disease are next entered upon, and here the writer gives us a very sufficient account of germs, their varieties, conditions of growth, how they get into the body, how they can be fought against outside the body, and lastly how Nature herself fights against them. Then we come to the diseases caused by the special germs, such as cholera, typhoid fever, dysentery, plague, yaws, and others, and here the methods to be employed in prophylaxis are clearly laid down. Malaria is the next subject considered. The history of the discovery of its cause is clearly given; the various forms of the parasite are detailed, the mosquito described and illustrated by some well-executed plates, and finally, the stages of the malarial parasite are portrayed. An excellent chapter on the prevention of malaria follows. Dr. Prout then proceeds to the subjects of sleeping sickness, of filaria, and of yellow fever; and here, perhaps, the author might have told us more fully of the experiments of the American Commission. The various intestinal parasites are described, as are also the guinea-worm, the jigger, the tumbu, and the

parasite causing craw-craw. A very important chapter is that on food. Here we find the points relative to the different kinds of food detailed and the amount of food necessary to be taken indicated. Then some of the diseases caused by food are alluded to, whilst the matters relative to cooking and the time for taking food in the tropics are not forgotten. This section concludes with the subject of beverages. An excellent method for making tea is given, and the rules for the drinking of alcohol could not be improved upon. Water-supply receives its full meed of notice: the characters of a good water, the sources of water and the indications to be gathered therefrom, the impurities of water and the diseases provoked by them, and lastly, the methods of purifying water—all are described. The remaining sections are connected with air and respiration and the subject of ventilation, and with the dwelling, its site, water-supply, sewage removal, and conservancy system. The author particularly points out the dangers inherent to cesspits and recommends the pail system. The final section embraces the matters connected with clothing, its materials, colour, and amount. The author has produced a book which every sojourner in the tropics should possess, for the lessons which it conveys are invaluable.

Medical Morbid Anatomy and Pathology. By HUGH THURSFIELD, M.D. Oxon., F.R.C.P. Lond., Senior Demonstrator of Medical Pathology, St. Bartholomew's Hospital, Assistant Physician to the Hospital for Sick Children, Great Ormond-street, and to the Metropolitan Hospital; and WILLIAM P. S. BRANSON, M.D. Camb., M.R.C.P. Lond., Junior Curator of the Museum, St. Bartholomew's Hospital, and Assistant Physician to the Royal Free Hospital. London: H. K. Lewis. 1909. Pp. 262. Price 6*s.* net.—This book is practically a small but convenient handbook to the student studying the morbid anatomy of medical diseases in a hospital museum, and the authors have given references to the specimens in the museum of St. Bartholomew's Hospital for the assistance of students of their own school. The descriptions of morbid conditions affecting the various systems and organs are, however, given didactically, so that they would be equally useful in any well-furnished museum. An introductory chapter is devoted to brief consideration of certain general pathological states and processes, including inflammation and the retrogressive tissue changes. Here we have brief accounts of the nomenclature and classification of tumours and of the life-history of the commoner parasitic worms. This chapter contains in condensed form a considerable amount of useful information, but it might have been extended with advantage. The remainder of the book is divided into chapters, each devoted to the diseases of an organ or of a system. The morbid processes affecting them are enumerated, and descriptions are given of their general characters and of their effects. These well written descriptions, though concise, are in the majority of cases adequate. The general arrangement and classification are good, and the authors have wisely not confined themselves to mere descriptions of specimens. To the student in the wards or working through the museum specimens after a course of systematic pathology this little book should be useful, and we can commend it for this purpose. The margins would allow room for the student to insert the numbers of specimens in the museum of his own school, and there are also some blank pages at the end of the book for notes.

Phono-Kardiogramme. Von Professor OTTO WEISS. Mit 41 Figuren im Text. Jena: Gustav Fischer. 1909. Pp. 37. Price M.1.50.—For the proper understanding of the time relations of the movements of the heart the relation between those movements and the moment of beginning of the two cardiac sounds is of the greatest importance. The author gives a succinct account of the various methods that have been used to record these sounds and their relations. In the subjective method of Martius the auscultator recorded, by means of a Marey's tambour, on a drum the tones when he heard them, at the same time recording a cardiogram. In the objective methods the vibrations produced by the sounds are transferred by various apparatus which are thrown into vibration and the vibrations themselves recorded. One of the best known of these methods is that of Hürthle, who used a microphone. Einthoven also used a microphone, but substituted the capillary electrometer for the rather sluggish electromagnet of Hürthle. Holowinski also used a microphone. Frank used a caoutchouc membrane which collected the vibrations, and on the membrane was placed a mirror which threw a beam on a photographic plate. The author substitutes a circular soap film, which he says in sensibility far exceeds the microphone. To this is attached a silvered glass thread. The whole apparatus he calls a "phonoscope." The author then proceeds to analyse the curves he has obtained both in health and disease, recording always at the same time either a cardiogram or the pulse at the carotid artery. He has also by his method been able to photograph the heart sounds of the fœtus in utero. It is obviously a method of extreme delicacy, and might well attract the attention of physiologists.

The Public Health Service Directory and Year-book, 1910. Compiled by the Editor of the *Medical Officer*. London: Hodgetts, Limited. Pp. 317. Price 6*s.* net.—This Directory will be of considerable service to public health officials and those who want immediate information in respect to the *personnel* of the various health departments of the country. The compilation gives the names, addresses, appointments, and qualifications of the medical officers and sanitary inspectors of all the health authorities in England, Scotland, and Wales. This list includes officials concerned in the medical inspection of school children. Another section gives particulars concerning the isolation hospitals, while space has been found for lists of public analysts, municipal dental officers, and veterinary officers. The directory has been compiled by Mr. George S. Elliston, the editor of the *Medical Officer*, who, in a frank preface, admits his knowledge that his lists of names and appointments cannot claim in many directions to be complete. In addition to the lists of names there are also articles defining the powers and duties of the medical officer of health, the veterinary officer of health, and the sanitary inspector, and there is a useful note on women in public health work. While most of the information in this directory can be obtained in other places we can conceive that there may be considerable convenience for many people in bringing it together under one cover.

Sehprobentafeln zur Bestimmung der Sehschärfe für die Ferne. By Dr. v. AMMON. Pp. 8 sheets and text. 1909. Munich: J. F. Lehmann's Verlag. Price M.4.—These new test types consist of letters, numerals, and hook-shaped figures built on the same principle as Snellen's test types. Like them, each figure subtends a visual angle of 5 minutes at the nodal point of the eye when it is placed at the stated distance, and the thickness of the individual strokes of the figures subtends a visual angle of one minute under the same conditions. The modifications from Snellen's types are so slight as to be scarcely sufficient reason for replacing the older and well-established types.

Register für Augenärzte. By Dr. med. GEORG HIRSCH. Leipsic: Verlag von Wilhelm Engelmann. 1909. Price M.7. —This is a case-index with columns for the record of year,

number of case, sex, and notes. The whole range of eye diseases is catalogued under appropriate headings, such space being devoted to each as the author thinks suitable. In this respect the book labours under the difficulty common to all indexes in book form—there is no elasticity. Thus one may consider that 86 pages out of 192 is an unduly liberal allowance for errors of refraction and accommodation, subjects which only those working at some particular point of interest in this domain are likely to wish to catalogue exhaustively at all. In our own experience the card-index system is superior to any other for such a purpose as that for which this book is primarily intended.

The City of London Year Book and Civic Directory for 1910. London: W. H. and L. Collingridge. Pp. 422. Price 5*s*.—At first sight this volume looks like the old familiar "City of London Directory," but closer inspection shows the compilation to be different in several particulars. The general directory of names and addresses of merchants and companies in the City has been omitted and the information in regard to the Corporation, County Council, City charities, committees, and Livery Companies has been retained and amplified. The old directory appeared annually for the past 39 years, and was largely valued for its special and exclusive information, all of which features have been retained under the new name and reduced price of 5*s*. This change will be welcomed by many. Moreover, the special information concerning the civic affairs of the City of London cannot but increase, so there is room for judicious expansion in the new book.

Reports and Analytical Records
FROM
THE LANCET LABORATORY.

"TABLOID" LODAL.
(BURROUGHS, WELLCOME, AND CO., SNOW HILL-BUILDINGS, LONDON, E.C.)

Lodal is regarded as a therapeutic advance on cotarnine, producing a tonic contraction in the pregnant and non-pregnant uterus; but it differs in exercising more effect on the heart, slowing and strengthening the beat and producing vaso-constricting action. Lodal is said to have the same effect on the higher centres, its action in this regard being more powerful than that of cotarnine. The principal value of lodal appears to be in cases of uterine hæmorrhage.

BULGARIAN SOURED-MILK CHOCOLATES.
(ROWNTREE AND CO., 1, GREAT TOWER-STREET, LONDON, E.C.)

Laboratory experiment proved the lactic-acid developing power of the contents of these chocolates. Milk sown with some of the interior portions of the chocolate developed lactic acid in a short time. From an initial acidity the acidity arose to three times as much in 24 hours. The chocolates are well prepared and there is not the slightest objectionable flavour about them.

ANALAX.
(R. DEMUTH, WORKS AND LABORATORIES, 68, SALUSBURY-ROAD, WEST KILBURN, LONDON, N.W.)

The claims for this aperient drug seem to be well grounded. The pharmacological basis of the palatable pastille, Analax, is phenolphthalein, which has been largely used as an aperient during recent years, some observers maintaining that it contains a group related to the active constituents of aloes. In the analax pastille the phenolphthalein is combined with a valerian group about which there are two points of therapeutic importance. Valerianic acid, in the first place, has a sedative effect, but this effect, owing to its rapid absorption, may pass off before the action of the aperient is begun. It is desirable, therefore, to obtain a sedative and aperient action simultaneously in the intestinal tract, and this is obtained by employing anavaleryl-acetyl-phenolphthalein. The analax pastille is a pleasant jujube which gives a mild but certain laxative effect. The drug acts without any suggestion of griping.

CAR-MA-ME PREPARATIONS.
(BASH AND CO., 35 AND 36, FOLEY-STREET, LONDON, W.)

We have received from the above firm a series of quite elegant preparations for the cleansing of the teeth and mouth. We have seen a list of the ingredients employed to make up the various preparations submitted, and each individual product is one that is well adapted for the purpose claimed for it. In addition to being germicidal they are pleasant to use. In the instances examined we found the description in regard to the ingredients present to be correct. The zinc chloride mouth wash deserves mention as an effective preparation for preserving the teeth and for improving the condition of the gums. The preparations in general may be confidently employed for producing a scientific cleansing of the teeth and mouth, and in spite of the presence of powerful germicidal agents they are agreeable to use in such employment.

WORMSER WINEMUST.
(AGENCY: GEO. OTTO HENNINGER, 11, GREAT JAMES-STREET, BEDFORD-ROW, LONDON, W.C.)

We have examined four varieties of this grape juice, which is stated to be expressed from grapes grown in the well-known vineyards in the district around Worms on the Rhine. They possessed an attractive flavour and were remarkably free from that mawkishness which marks some grape juices. The merest trace of alcohol was found, the quantity being quite negligible. The juice was in a good preserved state, although there was no evidence of chemical preservatives being present. The juice on boiling gave no coagulum. On analysis the Riesling specimen (white) gave the following results: extractives, 14·41 per cent.; mineral matter, 0·23 per cent.; grape sugar, 13·50 per cent.; and tartaric acid, 0·54 per cent. The specimen labelled Burgundy gave the following results: extractives, 14·65 per cent.; mineral matter, 0·20 per cent.; grape sugar, 13·70 per cent.; and tartaric acid, 0·56 per cent. The specimen labelled Liebfraumilch gave the following results: extractives, 18·58 per cent.; mineral matter, 0·33 per cent.; tartaric acid, 0·72 per cent.; and sugar, 16·65 per cent. The specimen called Portuguese gave: extractives, 18·50 per cent.; mineral matter, 0·25 per cent.; tartaric acid, 0·95 per cent.; and sugar, 16·65 per cent. It will be noticed that the last two are of a "fuller bodied" character than the previous juices.

PROTEID FOODS.
(THE WILTS UNITED DAIRIES CO., LIMITED, DEVIZES, WILTS.)

The feature of these food preparations is that they are for the most part enriched with milk proteid. According to our analysis, their general defect is the small proportion of fatty matters. In no instance did the fat exceed more than 5·3 per cent., except in the "protette" cocoa, which of course contains cocoa fat. We also note that the baby food is described as "free from starchy elements, which frequently cause stomach troubles," whereas we found the preparation to contain starch as well as sugar. The "albiron" food seems to have its claims based upon the presence of phosphates and of iron. We found a very small quantity of iron present but a considerable amount of phosphates, chiefly in the form of the insoluble calcium salt. The food was unattractive by reason of its peculiar smell. The proteids in these foods ranged from 23 to 31 per cent. and the carbohydrates from 45 to 58 per cent. The mineral matter throughout the series was high owing to the addition of phosphates.

THE LANCET.

LONDON: SATURDAY, APRIL 30, 1910.

Medical Internationalism.

WE gave an account recently of a meeting of the Bureau of the Permanent Commission of the International Medical Congresses. It is an excellent plan, that these great congresses should be directed and arranged by a permanent commission. In no other way can the administrative work of each congress be made sure of profiting by past experience. If there be no continuous authority, no traditional principles, no established procedure, all congresses become so much the harder to organise, and are in danger, more or less, of failure. Even with the help of a permanent commission innumerable difficulties attend the arrangement of a Congress of Nations and the three years of preparation for the International Medical Congress in London in 1913 will bring to the commissioners many problems of management. At the meeting held at The Hague, one of the commissioners presented a pamphlet by Dr. EIJKMAN on "Medical Internationalism." Dr. EIJKMAN is a fervent internationalist, and his pamphlet deserves careful study. It is published by the Bureau Préliminaire de la Fondation pour l'Internationalisme, a title not easily rendered into English, but it might be translated thus: First Steps toward taking the World as a Whole. The aim of this society is "the organisation of organisations," the drawing together and linking-up of all that each nation is doing for the official development of its own interests and well-being. For this purpose the society keeps records of the associations, unions, leagues, conferences, exhibitions, and congresses of every nation. Say that we wish to see at a glance what the whole world is doing to fight slavery, or drunkenness, or prostitution, or the sweating system, or the adulteration of food: the society has a list of the many societies all the world over that are thus fighting. Say that we wish to estimate what is being done by the world for the advancement of this or that art or science or charity: the society will tell us. By thus informing each nation of the doings of other nations the society hopes to bring about closer coöperation, better understanding, readier action, more intimate union. In brief, it is for the promotion of internationalism. And, of course, it has among its records the names and programmes of all international medical societies. The list of them is of great length, and many of them are held in honour everywhere. But, as Dr. EIJKMAN says, they are not all of equal importance; and he lays down this wise rule, that the organisation of organisations must not include those things which are not worth organising.

This word international, like other words of the highest nobility, is often abused. Half-a-dozen Germans play chess with half-a-dozen Englishmen, and call it an international tournament. Little societies of exceptional people, little *anti*-societies (who are not to be called enthusiasts, for that would debase another noble word), though at odds with the vast majority of mankind, call themselves international leagues, or even world's leagues, as if they represented the laws of nature. Indeed, it might be truly said that the titles which these societies give to themselves in their cradles are mostly in inverse proportion to their size, and many societies are written down as international which have little more than a local interest, and not much of that. Dr. EIJKMAN refers in the course of his pamphlet to some of these societies which are concerned—for better, for worse—with medicine, and even he seems to be impressed by the grandeur of their names. For instance, there is what he calls the Fédération Universelle de la Régénération Humaine. It sounds, in French, quite splendid; but its English name, the Malthusian League, removes the claim of romance. Again, there is the International League against Dust on the Roads; and the World's League of Opponents of Vivisection, which, as a witness told the Royal Commission on Vivisection in 1907, had 63 members; and the International Association for the Purification of Rivers, the Soil, and the Air. Altogether, there are so many international activities that little would seem to be left for merely national enterprise, if these societies lived up to their titles. All the same, the way of the world's life has been nationalism. It was all settled for us by the time that the earth was habitable for man. Seas and mountain-ranges kept the nations apart; profound differences of language, customs, and religion maintained them in a sort of natural isolation; and the legend of the tower of Babel has not yet lost its meaning. Out of it all has come a world full of differences, surprises, prejudices, racial antipathies, and wars. As time goes on these will all decrease in number or force, and we, who live in this day of vast facilities of transit, may be seeing the beginning of some system of fusion. But it must be remembered that if every phase of national thought could be internationalised, the discords would hardly be less than they are now. So soon as vaccination, for instance, was made an international affair, immediately antivaccination would also be made an international affair. At present each nation keeps its own discords to itself.

Of course, in matters of law and of arbitration the more internationalism we have the better, for in all those functions of the world's life which are controlled and regulated by law and order each nation is the concern of all nations. So great are the advantages which all nations obtain from international law that we ought to reckon it even higher than international medicine. But international medicine is the great handmaid of international law. Take, for example, the study of tuberculosis, or of plague, or of sleeping sickness. Certain facts have been made out, and are become the world's property, as to the ways in which these diseases are maintained and spread. But laws must be enforced and obeyed if these facts are to be used for the healing of the nations. And International Medical Congresses, the outward sign of medical internationalism, form special occasions for the distribution of these facts. It is a platitude that science does not recognise the differences that are between

the nations, but if the principles of science belong to all nations, the men of science do not. There is room for doubt whether men of science are not the better for restriction within the limits of nationality. They do the best work sometimes who work individually. Internationalism is the world's market for the output of individualism, the great exhibition of works that were each of them made by different men in different workshops. And it is certain that the world is enriched by this bringing together of their results, this wider publication of their teaching.

Bacteriæmia in Tuberculous and other Infections.

THE method of cultivation of the blood removed by puncture of a vein under rigid bacteriological precautions to discover micro-organisms, now generally known as the method of blood culture, has established itself as a valuable procedure in many infective diseases and has yielded results of notable value in regard to the diagnosis and even of the treatment of many general infections, especially in a group which has been classified as cryptogenetic septicæmia. Striking as these practical results have been, the contributions which this method has made to the scientific study of the pathology of bacterial infections have been no less remarkable. It has thrown considerable light upon the nature of the conditions to which the names of sapræmia, septicæmia, and pyæmia have been given. These terms were originally applied to the effects of invasion by the pus-producing cocci or their products. The advances of our knowledge have, however, led to the use of the term "septicæmia" to connote any condition in which the blood contains infective organisms, while the term "pyæmia," or the hybrid "septico-pyæmia," has come to indicate any condition of general or blood infection associated with secondary suppurative foci in the organs or tissues of the body. This extension of the original connotation of these terms has led to some confusion, and to obviate this, in the case of septicæmia, the somewhat ungainly terms "bacillæmia" or "bacteriæmia" have been proposed, or sometimes the name of the organism is appended, so that we may speak of a typhoid septicæmia or a gonococcal bacteriæmia. In the case of pyæmia, again, not only may a blood infection by means of streptococci and staphylococci lead to secondary suppurative foci or metastatic abscesses, but organisms like the pneumococcus, the gonococcus, the bacillus coli, the bacillus typhosus, proteus and pyocyaneus may do the same. The method of blood culture has, moreover, demonstrated that the dividing line between sapræmia or septic intoxication and septicæmia or bacteriæmia is difficult to establish clinically, and has further shown that not a few conditions originally regarded as sapræmias are, at any rate in a majority of cases, septicæmias: e.g., in enteric fever numerous observations by different workers have shown that in 75 or 80 per cent. at least of the cases typhoid bacilli can be demonstrated in the blood at a period before Widal's reaction can be obtained—i.e., before the protective mechanisms of the blood have been set into action sufficiently to reveal themselves. The whole subject is somewhat complicated by the fact, now well known, that the normal blood serum contains substances which destroy bacteria or inhibit their growth. This property, which was originally affirmed by TRAUBE so long ago as 1874, was lost sight of until the important researches of NUTTALL in 1888, followed by those of HANKIN and BUCHNER, established it on a sure foundation of ascertained experimental facts. Apart from this protective action of the serum or plasma, bacteria injected into the blood stream are rapidly removed from it by the activity of the endothelium of the blood-vessels and by the phagocytic action of the white blood corpuscles, so that, unless the organisms have been injected in overwhelming numbers, it may be difficult or even impossible to demonstrate their presence in the blood shortly afterwards either in films or by culture, although if a general infection results they may be found at a later period, when the protective reactions have broken down or become insufficient.

In view of the complexity of processes involved in infection and in immunity reactions, it is not surprising that there are many gaps in our knowledge of the precise characters of many specific infections. Some recent observations on human tuberculosis and experimental inoculation of animals by the tubercle bacillus tend to show that our views on the relation of the bacilli to the blood stream in these conditions may require modification. It has generally been supposed that in ordinary cases of localised tuberculosis few bacilli reached the blood stream, and that these were rapidly removed or destroyed; so that only in cases of general miliary tuberculosis and in the condition described as "typhobacillose" by LANDOUZY[1] were bacilli present in considerable numbers in the blood stream. However, Dr. L. COBBETT[2] demonstrated the presence of tubercle bacilli practically all over the body in calves within three days of the subcutaneous injection of 50 milligrammes of a non-virulent culture. He explains this as due to a passive escape and not as an active invasion, but the dissemination must have been effected through the agency of the blood stream. Dr. A. S. GRIFFITH and Dr. F. GRIFFITH[3] showed that tubercle bacilli were distributed all over the body of animals within 24 hours after subcutaneous inoculation, and they were able to inoculate guinea-pigs successfully with tuberculosis by means of the blood from these animals. In February, 1909, Dr. R. C. ROSENBERGER[4] published the results of his observations, in which he claimed that he had found tubercle bacilli in the blood in every one of 125 patients examined suffering from tuberculosis. In a second paper[5] he has extended his cases to a total of 300, and states that tubercle bacilli may exist in the blood of persons apparently healthy. These somewhat startling statements have not passed unchallenged, and while some observers report finding tubercle bacilli in the blood of tuberculous patients and in experimental tuberculosis in animals, others have obtained negative results. In these circumstances the examination of the technique employed by different observers becomes a matter of importance. The

[1] Transactions of the International Congress on Tuberculosis, 1908, vol. i., Part 2, p. 581.
[2] Second Interim Report of the Royal Commission on Human and Animal Tuberculosis, Part 2, Appendix, vol. iii., p. 223.
[3] Ibid., p. 237.
[4] American Journal of the Medical Sciences, 1909, vol. cxxxvii., p. 267.
[5] New York Medical Journal, 1909, vol. lxxxix., p. 1250.

whole question is reviewed in two interesting papers, one by Dr. JOHN F. ANDERSON,[6] the other by Dr. WILBUR A. SAWYER.[7] Dr. ANDERSON refers to the important paper of BERGERON[8] in 1904, in which a critical summary of previous work is included, and discusses the technique employed by Dr. ROSENBERGER, which was to draw about 5 cubic centimetres of blood from a vein in the arm and mix it with an equal quantity of 2 per cent. sodium citrate in normal saline solution. The mixture, after being well shaken, was placed in a refrigerator for 24 hours, when smears were made from the sediment and stained for tubercle bacilli. Dr. ANDERSON made a careful study of the blood in 48 cases of human tuberculosis and in 13 guinea-pigs and 8 rabbits experimentally infected. He examined films and cultures and investigated the results of inoculation of the blood into guinea-pigs. Of the 48 cases of human tuberculosis, 47 were examples of pulmonary tuberculosis with bacilli in the sputum, the remaining case being one of joint tuberculosis. In not one of them were tubercle bacilli demonstrated by examination of films, cultures, or animal inoculations. In one instance the films showed an organism having the morphological appearance and staining reactions of the tubercle bacillus, but it did not grow in cultures or infect guinea-pigs when inoculated. It is suggested that as the patient was a stableman, and the bacilli were not found in the blood immediately after withdrawal but only in the sediment after it had remained in an ice-chest all night, they may have been due to contamination with an acid-fast hay or grass bacillus. The results obtained in the case of the eight rabbits were interesting. In seven of them tubercle bacilli were found in the blood either by culture or guinea-pig inoculation or by both means. In spite of this, on careful observation by several observers of stained films made from the blood, in not a single instance could the bacilli be found. Of the 13 guinea-pigs, only one showed the presence of tubercle bacilli in its blood as tested by inoculation. It appears, therefore, that whereas tubercle bacilli can frequently be found in the blood of tuberculous rabbits, it is rare to find them in the blood of tuberculous human beings or of guinea-pigs in sufficient numbers to be demonstrable. The fact that Dr. ANDERSON could not demonstrate the bacilli in films from blood which was proved by culture and inoculation to contain bacilli tends to throw doubt upon Dr. ROSENBERGER'S observations. Dr. SAWYER was also unable to confirm them in the human subject, and therefore made a systematic investigation of the blood of tuberculous cattle, working in conjunction with Dr. C. M. HARING. He describes their technique, which was modelled on that of Dr. ROSENBERGER. Special precautions were taken to avoid contamination with acid-fast bacilli, even the distilled water, which, as has been shown by Dr. W. V. BREM,[9] may contain them, being carefully examined in order to ensure that it was free from such contamination. In 167 preparations made from the blood of 39 bleedings from 21 tuberculous cattle no tubercle bacilli were found. In one of the animals, after tubercle bacilli had been directly introduced into the arterial blood stream, they were found in the blood 25 minutes later, but not after one and a half hours, thus showing that the bacilli are rapidly removed from the circulation. Certain observations seemed to indicate that the capillaries of the lungs are more effective in arresting or removing bacilli than those of the peripheral circulation, which may be an explanation of the frequency of pulmonary implication in the tuberculous process when bacilli have entered at distant parts.

Although bacteria have been demonstrated in blood films made from the sediment after standing or centrifugalisation, the above quoted observations show that reliance cannot be placed upon them unless they are confirmed by culture or inoculation from the blood directly. The possibilities of contamination are so numerous that the most rigid precautions must be taken. Moreover, in order to render the results of blood culture of any value a sufficient quantity of blood must be withdrawn—at least 5 cubic centimetres, and if possible 10 or even 20. This should be divided between as many different culture media as possible and the inoculation of the media should be carried out directly after withdrawal, or with the least possible loss of time, in order that the bactericidal effects of the blood serum may be avoided. There can be little doubt that even in regard to the tubercle bacillus and its dissemination there is much yet to learn, and that systematic investigations such as those of Dr. ANDERSON and Dr. SAWYER afford valuable information. It is to be hoped that future workers will, as these observers have done, give full details of their technique and that by this means discrepancies may be avoided and the questions at issue satisfactorily settled.

[6] Treasury Department, Public Health and Marine Hospital Service of the United States, Hygienic Laboratory Bulletin 57, 1909.
[7] Archives of International Medicine, Dec. 15th, 1909.
[8] Thèse de Paris, 1904.
[9] Brem: Journal of the American Medical Association, 1909, vol. liii., p. 503.

The Constitution of the Prison Commission.

A DISCUSSION took place in the House of Commons at the end of last week over the substitution, as a Prison Commissioner, of Mr. M. L. WALLER, until recently Lord GLADSTONE'S private secretary, for Dr. H. B. DONKIN, the medical member of the Commission, who has retired under the age limit. That this discussion should have been necessary is at once a subject for congratulation and for regret; for congratulation in that it showed what growing importance is being attached by the public to the opinions of trained medical men in the Civil Service, for regret in that it brings into prominence what seems to be a rooted antipathy on the part of the clerical staff of a great bureau to the admission of men of science into the administrative offices even at a period in our national existence when everything is proving the importance of scientific methods in government. It might indeed be inferred that to add a scientific training to an already extensive lay education is regarded in the Civil Service as a depreciation rather than as an appreciation in value—an inference which receives support from the relatively small salaries which are granted to medical men in the public services. As an actual fact, a combination of medical and lay training is the one above all others which fits a man for any administrative office into which considerations for the physical and mental well-being

of the community enter; and the fact that Dr. DONKIN, a learned physician, has been replaced on the Prison Commission by a gentleman possessing only, if excellent, secretarial credentials is exceptionally unfortunate.

When some 12 years ago, as was well brought out by Sir HENRY CRAIK in the debate on the subject in the House of Commons, the Prisons Bill was introduced by Sir MATTHEW WHITE RIDLEY, at that time Home Secretary, several members of the present Government were clear in their insistence that one of the three Prison Commissioners must be a qualified medical man; and Sir MATTHEW WHITE RIDLEY, promising to strengthen the medical element, added that no doubt future Home Secretaries would adhere to the same principle. Mr. BALFOUR at the same time promised to have an official minute entered in the Home Office's archives on this matter. Dr. DONKIN was accordingly appointed by Sir MATTHEW WHITE RIDLEY; but as soon as he retires a young layman is appointed to fill his place by a Government presumably representing the very persons who so strongly advocated the principle of always having a medical man on the Commission. There is no political significance in the appointment, but it is difficult to regard the occurrence, as Sir HENRY CRAIK pointed out, as other than a reflection upon the sincerity of what is said in the House of Commons. With Mr. ROOSEVELT'S eloquent address at the Sorbonne fresh in our memory, we must not admit "that political morality differs from private morality, or that a promise made on a platform is different from a promise made in everyday life." Now the promise that the Prison Commission should be strengthened medically was made from a more reputable place than a platform—namely, from the front bench in the House of Commons—and it is sad that it should be broken in a cynical manner and as a matter of convenience. An endeavour was made to justify Mr. WALLER'S appointment on the ground that the whole-time services of Dr. DONKIN were being retained for five years at a salary of £200 per annum. Although we are glad to know that Dr. DONKIN will receive this augmentation of his pension until he is 70 years old, we cannot regard the arrangement as a substitution for a medical Commissioner, or as a good method of dealing with the situation. The rule which holds in the Civil Service that a man must retire at 65 is sound. An arrangement by which services are retained until 70 is unsound, if only because the conditions of service are violated; but, this apart, as Mr. BALFOUR observed, "the whole point of the decision taken in 1898 was that a man who gave medical advice ought to be one of the persons responsible for seeing it carried out." Has Dr. DONKIN now a vote on the Board?

Unless some procedure can be arrived at by means of which there may be four Commissioners, one medical, in place of three, all lay, the injustice which has been perpetrated is likely to obtain for another five years, or until Dr. DONKIN feels that he can no longer devote his whole-time services to the Home Office for £200 a year. It is disappointing to find Mr. MASTERMAN, whose writings and speeches reach such a high ethical level, by way of apologising for this unfortunate business, for it is quite clear, as Sir WILLIAM COLLINS pointed out, that the need for a medical member on the Prison Commission is greater now than it was in 1898. The passing of the Inebriates Act, for example, has added to the duties of the bureau. It is our opinion that in justice to the progress of prison reform this matter cannot be left where it is, and, unsatisfactory as it would prove economically, probably the best compromise, if no other duties can be found for the promoted private secretary, is to appoint a fourth—and medical—Commissioner. It is unfortunate that this episode should have occurred at a time when Royal Commissions and public opinion are alike emphasising the importance of engaging the services of specially qualified men to deal with situations where a medical training is essential; and it would serve to re-establish public confidence if the Home Office would at once rectify this administrative slip. It will be useful to assure the public that in future posts practically created for men with scientific attainments shall not be bestowed upon laymen. Mr. CHURCHILL has made an official explanation, but we hope that the subject will not be allowed to lapse.

Annotations.

"Ne quid nimis."

PHARMACOPŒIAS.

A COMPLEX civilisation necessitates the division of labour and the differentiation of functions, and this axiom applies to the practice of medicine as to all other forms of human activity. Time was when the physician culled his own simples and prepared with his own hands the remedies which his patients required; but in these latter days such work is assigned to pharmacists who are specially trained to perform it, and whose functions are often again subdivided, different individuals performing the operations of galenic and extemporaneous pharmacy. That the complementary labours of physicians and pharmacists may be efficiently performed it is essential that they should work in complete accord. There must be no secrecy between them; the physician must give explicit instructions as to what he requires, and the pharmacist must be ready to explain in detail how he fulfils his trust. In a word, they must speak a common language if the dangers of empiricism on the one hand and charlatanism on the other are to be avoided. These considerations have led to the compilation and publication of pharmacopœias, which are essentially recipe books, specifying in detail the variety, quality, and strength of each medicament which they name, and giving formulæ, processes, and methods of assay in order to ensure uniformity in compound preparations. When an article included in a pharmacopœia is prescribed something which answers the requirements of that book should be supplied, but it is somewhat doubtful how far this moral obligation can be enforced by legal process. In order to elucidate this question we have asked a legal contributor, who has made a special study of it, to state his opinion for the benefit of our readers, and this he has done in an exhaustive article, which will be found on page 1220 of the present issue. It will be noted that special stress is laid upon the importance of discriminating between drugs as such—that is to say, when used in medicine—and the same substances when used for manufacturing, commercial, or domestic purposes. We trust that this important point will receive the earnest attention of the committee now engaged in drafting a new edition of the British Pharmacopœia, and would commend to their notice the following pregnant words which are to be found in the preface to the Pharmacopœia of the United States of America: "Inasmuch as there has existed in the past on the part of

the public a misconception of the purposes of a pharmacopœia, and penalties have been imposed upon those who have sold substances bearing pharmacopœial names which were to be used in the arts, for manufacturing and other purposes, and not as medicines, it has become necessary to make the following declaration—'The standards of purity and strength prescribed in the text of this Pharmacopœia are intended to apply to substances which are used solely for medicinal purposes and when professedly bought, sold, or dispensed as such.'"

THE PATHOLOGY OF MUMMIES.

IN the manner of children with toys the ancient Egyptians went through a process of make-believe with their dead. Well acquainted as they were with the rapid putrefactive processes of a hot climate, they thought to frustrate these by embalming corpses so as to resist decay and to retain, perhaps for ever, some semblance of their habit as they lived. Whatever its later developments, the pathetic original theory evidently was that the dead only slept, and if their bodies could be kept intact they would at some time or other awake and resume the ordinary business of life. Hence, of course, the fact that the dead were often buried in mortuary chambers with furniture and utensils about them. It has been left to Europeans, some 8000 years and more after the date of the eighteenth to twentieth dynasties, to make the melancholy discovery that the Egyptians buried many things with those whom they loved, for which the latter had no sort of use in a second life. Had they known, for instance, what they were about, they would certainly not have been at pains to ensure the perpetuation of diseases in the mummies under their care. Still more, they would have refused a factitious eternity to parasitic life or bacteria. One is almost glad that the old pious Egyptians are not able to see the unrolling of their friends, for their feelings might be hurt by our discovery of pathological conditions probably never suspected or understood by them. Writing in the *Cairo Scientific Journal* for January, 1910, Dr. M. Armand Ruffer has given an interesting account of his examination of a number of mummies of the period of the eighteenth, nineteenth, and twentieth dynasties, now in the Hearst collection in the Museum of the School of Medicine at Cairo. From this microscopic examination it would appear that the ancient Egyptians exhibited a variety of grave pathological phenomena. Arterial disease was of "frequent occurrence, and, indeed, temporal arteries of mummies in various museums are as tortuous as they are at the present day, even in people who died when comparatively young." Lung disease was common. "The lungs of one mummy (twentieth dynasty) present all the signs of diffuse anthracosis," being choked with soot, as though in life they had been in smoke-laden air. "Numerous micrococci are packed in an alveolus" of another set of lungs, and Dr. Ruffer does not hesitate to diagnose pneumonia, "which had advanced to the stage of hepatisation." In the tissues of the liver and the blood-vessels of the same mummy large numbers of bacilli were also found. "These bacilli stain well with hæmatoxylin, methylene blue, fuchsin, but not with Gram's method. ..... It is clear that micro-organisms retain their characters unaltered in mummified tissue." These particular ones were ovoid in form and "about the size of plague bacilli though plumper." In other mummies renal lesions were found, which took the form, in one case, of multiple abscesses, full again of bacilli resembling bacillus coli. All these micro-organisms were dead and incapable of doing harm. In examining a renal calculus of Dynasty II. Mr. Shattock, the pathological curator of the Museum of the Royal College of Surgeons, found in a closed central cavity a mass of mould conidia in so good a state of microscopic preservation that he unsuccessfully attempted to raise a growth from them—they were dead. Were the bacilli of mummies capable of spreading disease among the living, who shall say what results might not follow?

HEALTH PROGRESS AND ADMINISTRATION IN THE WEST INDIES.

IN the spring of last year Sir Rubert Boyce, F.R.S., at the request of the Secretary of State for the Colonies, visited Barbados to investigate the circumstances associated with a local outbreak of yellow fever, and subsequently by official request he extended his visit to a number of other West Indian colonies to advise them generally on sanitary matters. An extremely interesting narration of his experiences has now been published in book form,[1] with a view of affording information not only to the medical profession but also to the public, including the tourist, the man of business, or indeed anyone who desires to visit temporarily, or reside permanently in, any of these beautiful West Indian islands. As regards Barbados, it possesses great natural advantages; its climate is dry and bracing, and the island is continually swept by refreshing breezes from the Atlantic Ocean. The soil is coral limestone, absorbent as a sponge. Under these conditions it is obvious that malaria-conveying mosquitoes cannot find favourable breeding-places, and, as a matter of fact, there is no indigenous malaria, Barbados being one of those parts of the tropical world which stand out unique in this respect. On the other hand, the stegomyia calopus is the common house mosquito of the colony. Some years ago the conditions which afforded opportunities for the breeding of this insect were almost entirely destroyed, more especially at Bridgetown, the chief seaport and capital of the island, by the introduction of a piped water-supply. This resulted in the removal of the barrels in which formerly water had been stored in close proximity to the dwellings, and in which the stegomyiæ previously had bred freely. In the past, yellow fever had often been epidemic in Bridgetown and other parts of the colony; but, as has been indicated above, the disappearance of this disease coincided with the introduction of a piped water-supply into the chief town. The epidemic investigated by Sir Rubert Boyce began in 1907, its origin having been ascribed to imported infection probably from the Amazon, Trinidad, or Martinique. The malady, it is now known, had existed unrecognised for some months in Barbados. No cases had occurred for a period of 26 years prior to 1907, so that the local medical practitioners were not familiar with the clinical characters of the disease. A large proportion of the cases occurred among the native black population, a generation of susceptible subjects having arisen since the occurrence of the last outbreak in 1881. It is asserted that if there had been proper medical administration in Barbados yellow fever would never have gained a footing in the colony in 1907. The sanitary organisation is said by Sir Rubert Boyce to be out of date; it is, he says, "as ancient and as picturesque as the characteristic sugar-cane crushing windmills dotted all over the island—eminently respectable but shabby, and not in conformity with the present age, nor calculated to yield the maximum return." There is no registration of the causes of death and there are no proper district medical officers of health, nor is there a chief medical officer of health to advise the executive and keep them informed of the health conditions of the colony. No regular reports are submitted and no information as to the sanitary circumstances of the island is

[1] Health Progress and Administration in the West Indies. By Sir Rubert Boyce, M.B., F.R.S. With 47 illustrations and 1 map. London: John Murray. 1910. Pp. 328. Price 10*s.* 6*d.* net.

forthcoming unless specially asked for. In most parishes the parochial medical officer appointed under the Poor Relief Act is the adviser of the vestry on health questions, but his only responsibility is to make a quarterly report. No definite or systematic inspections or inquiries into sanitary conditions are required of him, and his reports are often perfunctory. As these appointments for medical relief purposes are in the hands of the vestry, which can relieve the officer of his duties at six months' notice, he is not in a position to comment freely on insanitary conditions coming under his observation, as by doing so he is likely to offend the susceptibilities of his employers, on whose goodwill his tenure of office depends. We may here remind our readers that something closely resembling this is not unknown in a number of districts in England and Wales, where the part-time medical officer of health has frequently to submit to annual reappointment, and if he offend a majority of his council by a display of zeal he is liable, as a reward, to be superseded in his appointment. Summing up the state of sanitary administration in Barbados Sir Rubert Boyce describes it as "barbaric and primitive" and standing in urgent need of improvement. Accordingly, he recommends the Government to introduce a Bill without delay for the registration of deaths and causes of mortality, and for the establishment of a chief medical officer of health for the island with local medical officers of health under him for each district. These reforms should prove neither difficult nor costly; they would, if properly carried out, lift the colony into the first rank, and might make it simultaneously the ideal recuperating ground for the tired-out and sick ones of Europe and the United States. In this connexion we quote Sir Rubert Boyce's expression of his impressions of the health-restoring qualities of Barbados: "I shall never forget," he says, "the feeling of absolute repose, coupled with the stimulating and invigorating effect of the climate and scenery, which I experienced at all hours of the day, whether in the early morning, in the noonday sun, or in the late eventide; no matter what the hour, everything in life appeared sweet."

HARLEY STREET AND MEDICAL LOCALITIES.

IN the "Strange Case of Dr. Jekyll and Mr. Hyde," Cavendish-square is referred to by Robert Louis Stevenson as "that citadel of medicine," but the vogue of Harley-street, Wimpole-street, and the famous square is not, indeed, very ancient. The physicians and surgeons of the earlier part of the nineteenth century had mostly not moved so far west. They lived in Bedford- and Russell-square, or, in the case of several famous surgeons, close to the College in Lincoln's Inn-fields, while Finsbury-square had not by this time lost its attractions. The great medical men of the eighteenth century had no particular quarter; they lived scattered in fashionable parts of town. Radcliffe lived in Bow-street, and John Hunter in Leicester-square, not far from his brother William. Mead prided himself upon his spacious library, 60 feet long, in Great Ormond-street, where he entertained Dr. Freind from Albemarle-street and the literary physician Arbuthnot, from Cork-street, Burlington-gardens. This was in the mid-eighteenth century, at which period the City still flourished as the home of wealthy citizens, among whom were many resident physicians of repute. We get an early glimpse of Harley-street in 1780, when the notorious Lord George Gordon lived there on the confines of the open country to the north. To a sensible but less obvious extent practitioners in medicine and surgery have followed their Colleges as well as their patients. The first College of Physicians in London was in a certain sense the house of Linacre in Knightrider-street. Afterwards the physicians established themselves near Newgate, where, on moving to Pall Mall East, they were succeeded by the butchers of Newgate Market. The English surgeons, after being housed at Barber Surgeons' Hall in the heart of the City, came west, also to the neighbourhood of the great prison. The physicians established themselves in their present College in 1825; the surgeons were finally located in their first College in Lincoln's Inn-fields in 1813. Medicine and surgery having now established themselves, not in a corporate capacity but so far as the heads of the profession are concerned, in Harley-street and its neighbourhood, the Royal Society of Medicine is about to build its new home on the borders of that medical quarter of London. The student of London fashion may wonder whether, in a very few years, an exodus of the general well-to-do residents may not take place from Marylebone in the direction of Kensington or Hampstead, for there is certainly no finality in these questions of habitat. For ages it has been customary for the west ends of towns to be the resort of leisure, wealth, and fashion. But there will not be the necessity nowadays that prevailed in the eighteenth and most of the nineteenth century to establish central buildings where medical men may congregate, nor quite the same inducement for medical men to follow a peregrinating public. Enormously increased facilities of transit are rapidly making all parts of the metropolis accessible to everyone.

THE PATHOLOGY OF INFECTIOUS JAUNDICE.

AT a meeting of the Société Médicale des Hôpitaux of Paris on March 4th, M. P. Abrami, M. Ch. Richet fils, and M. R. Monod made an important communication on the pathology of jaundice. M. Abrami, in collaboration with M. Lemierre, has recently put forward the view that infectious jaundice (*ictère infectieux*) is usually the result, not of ascending infection from the intestine, but of descending infection from the blood. Of this the jaundice which sometimes occurs in connexion with typhoid fever is an example. The systematic examination of the blood in cases of infectious jaundice by Widal and other French observers has confirmed the view stated. The following case is an example. A woman, aged 36 years, was admitted into hospital with the diagnosis of scarlet fever. Eight days previously she was confined at term. In the last three days she presented signs of puerperal fever, and on the previous day generalised erythema and jaundice appeared. On admission the temperature was 105·6° F., the pulse was 160, the face was sunken, the eyes were surrounded by dark circles, and the lips were dusky. The patient was fully conscious and complained principally of hiccough and difficulty of breathing. There were manifest signs of general peritonitis; the abdomen was tympanitic and very tender in the hypogastric and iliac regions. The respiration was short and rapid and of the superior costal type; the diaphragm seemed to be immoveable. The erythema had all the characters of the puerperal scarlatiniform rash; it affected the whole body excepting the face and was most marked on the neck, abdomen, and thighs. There was neither angina nor scarlatinal stomatitis. The jaundice was well marked; the face and conjunctivæ were of a sulphur-yellow colour. The fæces were decolourised and the urine was dark-coloured and contained bilirubin in abundance. The liver extended three finger-breadths below the ribs and the spleen was enlarged. Death occurred in the evening. A culture made from the blood during life yielded in 24 hours a pure growth of streptococci, which on inoculation into a rabbit produced typical erysipelas. At the necropsy the uterus was found to be of the size of a fist; it contained neither clots nor placental remains, but a little opaque inodorous serous fluid. Its internal surface was of a violaceous-red colour and its walls

were flabby and œdematous. There was ulcerative endometritis. The fluid in the uterus contained streptococci in abundance and they were also present in sections of all the coats of the organ; some of the venules were thrombosed. There was no pelvic peritonitis, but there was a little opaque serous fluid in the pelvic cavity. The liver was large and a little softened. On section it showed greenish and violaceous colours. The gall-bladder contained transparent fluid devoid of bile-pigment but giving Pettenkofer's reaction. The fluid contained numerous epithelial cells, a few polynuclear leucocytes, and streptococci. There was no obstruction of the bile-duct or biliary passages, and histological examination of the intra-hepatic ducts showed no angiocholitis. Fragments of liver, the surface of which was cauterised, yielded a culture of streptococci. Histological examination of the liver was unsatisfactory in consequence of decomposition. This case is a further example of the thesis of M. Abrami and M. Lemierre that infectious jaundice is usually only a localisation in the liver of a general bacteriæmia. It is generally supposed that such cases are examples of angiocholitis, which, by causing swelling of the biliary passages, produces retention. Angiocholitis, no doubt, occurs in some cases of infectious jaundice, but such cases as the one now recorded suggest the question whether when present it is the cause of the jaundice or only an accessory condition. Further, marked angiocholitis has been found in cases without the slightest trace of jaundice. It follows that infectious jaundice is due to parenchymatous changes in the liver itself—in other words, to hepatitis.

COLD WEATHER AND PLANT LIFE.

THE present snap of cold weather in regard to its effect upon the life-processes of the plant recall the results of some interesting experiments in which plants were submitted to artificial cold and to the action of certain volatile fluids. It is well known that the potato develops a sweet flavour after it has been exposed to frost, and there seems to be little doubt that this is due to the formation and accumulation of sugar by the enzyme. Under favourable conditions of temperature there is no accumulation of sugar, because the oxidation or respiratory process proceeds unhindered and sugar disappears. Cold does not stop the enzyme working, but it arrests the respiratory process, which thus fails to destroy the sugar, and so it accumulates in the tuber and gives it the well-known sweet taste of a frost-bitten potato. Further observations have shown that cold precipitates an interaction between such glucosides as are present in the leaves of certain plants. When, for example, the leaves of crucifers are strongly chilled or exposed to the vapour of chloroform they soon give evidence of mustard oil being present. Similarly, the leaves of gaultheria produce methyl salicylate, the constituent of winter-green oil. Then in the case of those plants which produce hydrocyanic acid, the so-called cyanogenetic plants, the leaves on chilling evolve prussic acid. For some reason not yet clear it would appear, therefore, that the chloroformisation or etherisation, or chilling of plant leaves sets up an interaction between what glucosides and ferments are present, resulting in a premature formation of products which would be steadily and continuously evolved under normal conditions of temperature. It is hardly surprising, in view of these results, that when the even tenour of the spring or summer season is disturbed by the intrusion of a period of very cold and severe weather a profound influence one way or another is brought to bear upon vegetable life. It is difficult to conclude that unseasonable weather is without similar disturbances on the human mechanism. Apart from temperature, the question of moisture alone has a greater bearing upon the well-being of individuals than hitherto has been conceded to it when we consider the important part which moisture plays in the great vital processes. The study of moisture in air as a factor in health is still in its infancy, and it is a question whether, after all, the great fluctuations in the degree of humidity of the air to which we in the English climate are exposed are not more directly responsible for unsteady health than are the variations of temperature.

SUTURE OF THE RECURRENT LARYNGEAL NERVE.

IN the *Boston Medical and Surgical Journal* of Feb. 24th Dr. J. S. Horsley has reported what appears to be the only case on record of suture of the recurrent laryngeal nerve in man. A considerable amount of experimental work has been done, chiefly by those interested in veterinary surgery, in which the left recurrent laryngeal nerve was divided and implanted higher in the vagus. Most of these experiments were successful in restoring the function of the laryngeal muscles supplied by the nerve. In Dr. Horsley's case the left recurrent was injured by a bullet and all the laryngeal muscles supplied by it were paralysed. Three months after the injury an incision was made along the anterior border of the sterno-cleido-mastoid muscle and the injured nerve was easily found in the groove between the œsophagus and trachea. The injured portion was excised, excepting a small filament consisting of the posterior part of the nerve sheath. The ends of the nerve were brought together with a single suture of No. 0 chromic catgut and a fine curved needle. Some muscle tissue was drawn over the sutured nerve. The wound healed by first intention and the patient left the hospital nine days after the operation with no improvement in voice or breathing. Subsequently gradual improvement occurred. About two months after operation a laryngologist found improvement in the muscles supplied by the nerve; 15 months after the operation recovery was complete.

THE TREATMENT OF MENINGOCOCCUS CARRIERS.

THE part played by the healthy carrier of certain infective organisms in disseminating the diseases produced by them is now generally recognised, and measures for the diagnosis and quarantine of carriers have been frequently discussed, notably in regard to carriers of the typhoid and paratyphoid organisms, the diphtheria bacillus, and the meningococcus. We published in THE LANCET of April 16th an annotation dealing with the measures employed to deal with the carriers of the meningococcus in Belgium. An interesting paper by Dr. Hans Bethge of Gelsenkirchen appears in the *Deutsche Medizinische Wochenschrift*, No. 2, 1910, describing the means employed to deal with the carriers in an epidemic of meningococcal meningitis at the Catholic Orphan Asylum in that town. Nine cases of the disease occurred, 8 of the patients being girls, one a boy. They were treated by intraspinal injections of Kolle-Wassermann serum and all recovered, except one child which died some months later from pulmonary tuberculosis. All the inmates of the institution were examined for the presence of meningococci in the naso-pharynx and 60 carriers were found, distributed as follows: 5 nurses, 2 workmen, 32 girls, and 21 boys. Of these, 57 were isolated and systematic endeavours were made to get rid of the meningococcus by various means. In order to judge better of the relative value of the different measures employed, the 57 carriers investigated were divided into six groups, and in all except one of these groups the naso-pharynx was first irrigated by means of 1 per cent. sodium chloride solution run in from

a pressure height of one metre. The first group was treated with a spray of pyocyanase, the second with an irrigation of 3 per cent. perhydrol, the third with a spray of Kolle-Wassermann serum, the fourth with an irrigation of protargol in 1·5 per cent. solution, the fifth by simple washing out with salt solution, while the sixth group received no treatment of any kind. The irrigation with saline and the other forms of treatment were carried out twice daily. The results demonstrated that the meningococcus persisted longer in the cases without treatment than in the others. The spraying with serum gave only a slight result; pyocyanase, perhydrol, and protargol acted fairly satisfactorily, the perhydrol giving the most rapid effect, since the meningococci disappeared on an average after 8·6 days of treatment, whereas nine days were required with protargol and 12·7 with pyocyanase.

AMERICAN MORTALITY STATISTICS.

IN view of the near approach of another decennial British census, and of the preparations now proceeding for that event, the experience of other countries enforcing periodical counting of their inhabitants becomes for us especially interesting at the present time. The latest census returns of the United States of America have been utilised by Mr. Edward B. Phelps of New York for the preparation of an elaborate analysis[1] of American mortality statistics, the necessary data having been derived from the special reports of the Census Bureau at Washington. Until quite recently the only trustworthy American vital statistics were those compiled annually for "a mere handful of States in the East." The vital statistics of the decennial censuses are judged by the author to be practically worthless—comparisons of figures for single years a decade apart being for many reasons untrustworthy. Owing to loose legislation respecting birth and death registration, the imperfection of death certificates, and the frequent changes in the *personnel* of registration bureaus, no useful comparison has until recent years been possible of the records of even the group of districts within the registration area. Even now the data required for accurately computing the death-rates of the United States as a whole are lacking. Nevertheless, inasmuch as the existing registration area includes more than half of the population of the United States, Mr. Phelps is satisfied that the foundations for computing the nation's annual death-rates have now been fairly laid. In the present pamphlet the annual mortality records of the Census Bureau are presented in detail for each consecutive year from 1900 to 1908, and as far as the author is aware this detailed information has not previously been published, although comparisons have occasionally been made for shorter periods of time. Before entering on his detailed analysis, the author is careful to make allowance for certain factors that disturb his calculations. For example, (1) the constantly changing character of the population in the registration areas, and (2) the circumstance that less than 7 per cent. of the total deaths were those of coloured persons; from which it appears that the Southern States, with a large proportion of coloured races, are for the most part excluded from the benefits of registration. Mr. Phelps includes a table in which the death-rates are compared for each of the nine years above specified, and in addition the average rates are shown for the last four as contrasted with the first five years of that period. The mortality rates are given not only for all causes but for 16 groups of causes, in the urban and in the rural parts of the registration area. From this table it appears that in the last four years, as compared with the first five of the nine-year period ended with 1908, the general death-rate fell from 16·6 to 16·0 per 1000. In a population of rather more than 40,000,000 this fall means a saving of nearly 90,000 lives in the four years as compared with the numbers that would have been lost had the average general death-rate of the previous quinquennium been maintained throughout the later period. The bulk of this life-saving occurred in the chief cities of the registration area, where the decrease of the death-rate was equal to 36 per 100,000 of the population, whilst the decrease in the rural parts of the area did not exceed 4·4 in the same number living. Proceeding to deal with the fatality of particular diseases, as shown by their recorded death-rate, Mr. Phelps emphasises the need of extreme caution in deducing conclusions from figures which cannot be regarded as otherwise than mere approximations to the truth. Speaking generally, however, we note that in the American registration area the fatality from enteric fever, diphtheria, tuberculous phthisis, and pneumonia has recently shown a marked decrease, whilst that from cancer, heart disease, diarrhœa, and enteritis has, on the contrary, considerably increased. With respect to the mortality from diseases of early infancy, Mr. Phelps remarks that "the recent talk about a vigorous campaign against infant mortality has not yet produced any appreciable results in the American community at large." In support of Professor Irving Fisher's estimate that about 40 per cent. of existing American mortality is preventable, the author remarks that "never before in the entire history of the country have so many agencies for social and sanitary uplifting been in evidence; never before have so many of the more intelligent class of Americans been actively identified with such movements. But, at the present rate," he pertinently asks, "how long will it take for this thinking handful of Americans to arouse and leaven the general mass of this country's population?"

[1] Analysis of Some Phases of American Mortality Statistics, 1900-1908, by Edward Bunnel Phelps, M.A., F.S.S. Reprinted from the American Underwriter, vol. xxxii., No. 4, December, 1909.

THE MEDICAL INSURANCE COMMITTEE.

A MEETING of the Medical Insurance Committee was held on Wednesday, April 27th, at the offices of the British Medical Association, when the report of the chairman, Dr. G. E. Haslip, was read and adopted. The report referred first to the death of the late chairman, Dr. Radcliffe Crocker, in whom the committee lost a colleague who always exhibited great practical interest in, and enthusiastic confidence as to the ultimate success of the objects in view. These objects, it may be briefly stated, are to obtain, by acting as agents, favourable terms in all forms of insurance for medical men, while retaining out of the agency rebates a small percentage to be employed in charitable movements where the medical profession is interested. The report showed that during the year the business of the committee has been satisfactory and progressive in all directions. The total increase of premium income reached some £725. Previous to the period now under review motor-car insurance had not been touched, but in November, 1909, the committee was able to issue through Lloyds a policy against all motoring risks which at once proved popular, and it seems that there is a reasonable possibility of this branch of the work developing to a valuable extent. During the two months of 1909 the premium income from this source reached £236, while for the three months of the current year it has already reached £650. As to the working expenses of the agency, postages naturally show a slight increase, while with the extended business more clerical assistance has been necessary. In connexion with the business of personal accident and employers' liability insurances, results tend to confirm the earlier experience that the renewal business involves considerable labour and correspondence, as the percentage of

variation year by year is considerable. Stationery and printing have cost less, but during the year 1908 a considerable portion of the initial outlay was brought into the accounts. The report points out that, having regard to the small amount of commission retained by the Medical Insurance Committee to cover working expenses, it was hardly contemplated that any large reserve could be built up. By the strictest economy, at the end of 1909, after providing for all liabilities, there was a surplus of £85 11*s.* 3*d.* It is true this is not a large amount, but since the committee has been at work it has returned in the form of rebates on premiums to those taking advantage of insuring through the agency a sum of over £500—a result by itself that fully justifies the existence of such an agency. During the past year the committee has been strengthened by the addition of Dr. D. J. Mackintosh, M.V.O., Mr. Hugh R. Ker, and Dr. Frederic Hewitt, M.V.O., all these gentlemen kindly consenting to serve. It only remains to point out that the future prosperity of the Medical Insurance Committee must depend on the support it receives from the medical profession. The terms offered by the committee in all forms of insurance are exceptionally advantageous, and those who avail themselves of them can not only effect a saving of a considerable extent to themselves but will enable the committee to carry out its original object—to devote after paying working expenses any surplus to suitable medical charities. The committee voted a donation of £10 10*s.* to the British Medical Benevolent Fund, £10 10*s.* to the Royal Medical Benevolent Fund of Ireland, £10 10*s.* to the Birmingham Medical Benevolent Society, and £15 15*s.* to the Guild in connexion with the British Medical Benevolent Fund. The five guineas allocated to this Guild in excess of the other donations were a recognition that the work had been recently started and without funds to meet the initial expenditure.

LEPROSY IN NEW SOUTH WALES IN 1908.

SOME interesting facts relating to leprosy in Australia are given in the annual report for 1908[1] recently received by us from Dr. J. Ashburton Thompson, chief medical officer to the Government of New South Wales. At the beginning of 1908 22 lepers remained under detention in the lazaret at Little Bay, which is situated some nine miles from Sydney. Two fresh cases were admitted during the year, 1 died and 3 were repatriated to the New Hebrides, leaving 20 patients in the lazaret at the end of the year, 12 of whom were whites and 8 coloured. A series of clinical and etiological notes of the cases admitted in 1908, together with detailed "surveys" of the white patients still under treatment, are appended to the report. A summary is also given showing the number of persons who have been isolated on account of leprosy in the lazaret since 1883, along with the number of deaths and discharges in each of the years included in the period. A tabular statement is furnished giving the number of lepers who came under observation during 1908 in the Commonwealth of Australia. From this it appears that in addition to the two new cases already mentioned as having occurred in New South Wales, 23 others were reported from Queensland and 3 from Western Australia; no fresh cases were recorded in Victoria, South Australia, or Tasmania during the year. As appendices to his annual report Dr. Thompson reproduces two papers, the first of which was read by him before the International Dermatological Congress at Berlin as far back as 1904, entitled, "A Review of Leprosy in Australia during the Ten Years 1894 to 1903, and a Description of the Measures in Force there for the Control of the Disease." It is explained that this paper has been reprinted for the reason that it was not generally accessible and also "because the account of the laws and penalties as regards leprosy throughout the Commonwealth (which is still as accurate as it was four years ago) is a necessary addition to the records contained in this series of annual reports." The second paper was read by Dr. Thompson at the Second International Conference on Leprosy at Bergen last year, and in it he relates his experience of a trial of Professor Deycke's nastin treatment in three cases of tuberous leprosy and in one of pure nerve leprosy. In none of the four instances could an appreciable benefit be ascribed to the treatment, although its use in the cases was prolonged respectively for ten, eight, six, and nine months. In Dr. Thompson's hands nastin is alleged to have behaved as an inert substance. This paper is illustrated by photographs and charts.

[1] Eighteenth Report of the Board of Health on Leprosy in New South Wales for the Year 1908. By Dr. J. Ashburton Thompson.

A DANGEROUS DRY SHAMPOO.

ANOTHER example of silly and dangerous lay advice is given in a letter which we publish this week from Dr. V. H. Veley. Gasolene is recommended for giving the hair a dry shampoo. As Dr. Veley points out, gasolene cannot be purchased by the public. Its use for any general purpose has been strictly prohibited owing to its giving off an inflammable vapour even below ordinary room temperature, say 15° C., or 60° F. But clearly some other petrol is meant which would be sure to be equally dangerous for all practical purposes as, unless it were rapidly volatile, it would not answer as a satisfactory dry shampoo at all. It is true that a note of warning is given, for it is recommended in our contemporary that the shampooing operation be done in daylight, and further, that the ears should be stopped with cotton wool during the process, as some people are apt to find that the vapours affect their hearing; but such directions, even if they are heeded, convey to the public very little idea of the extreme risk involved by the use of such a highly and easily inflammable fluid. Pretty girls, to whom this sinful advice is particularly addressed, would be well advised to eschew the use of highly inflammable materials for the cleansing of the hair. As we have pointed out before, it is difficult to understand why the public, pretty or otherwise, does not give such a perfectly safe and effective mixture as distilled water, spirit, and ammonia a trial.

DR. ROBERT FLETCHER.

THE announcement that the Royal College of Surgeons of England had conferred the honorary gold medal upon Dr. Robert Fletcher in recognition of his exceptional services to the profession calls attention to a man who has had a career of great interest. Born in Bristol in 1823, Dr. Fletcher received his professional education at the Bristol School of Medicine, and took the diploma of the Royal College of Surgeons in 1844. After practising for a time in England he went to the United States and settled at first at Cincinnati; at the outbreak of the Civil War he joined the 1st Ohio Infantry and served throughout the war. In 1876 he became associated with Dr. John S. Billings in the Surgeon-General's Library, where for nearly 30 years he has been engaged in bibliographical work of a unique character. Every single volume of the Index Catalogue of the Surgeon-General's Library has passed through his hands, and he has been editor of the second series. In the very first volume published (1880) Dr. Billings acknowledges the great debt the work owed to Dr. Fletcher. He was associated with Dr. Billings in the editorship of the first series of the "Index Medicus," and he has been responsible, with Dr. Garrison, for the issue of the second series. He has written extensively on anthropology and folk-lore subjects. He has been greatly interested in medical jurisprudence, on which subject

he has lectured for some years at the Johns Hopkins Hospital Medical School. Though in his eighty-third year, Dr. Fletcher is able to continue his work at the Surgeon-General's Library, surrounded by all the things which, as Shakespeare says, should accompany old age—honour, love, obedience, troops of friends.

THE REGISTRAR-GENERAL'S WEEKLY RETURNS.

THE Registrar-General has since the last census in 1901 published weekly returns of vital statistics relating to the 76 towns of England and Wales which then had an enumerated population amounting to 50,000 persons. From March 31st last the area and population dealt with in these returns have been somewhat increased. At that date the municipal borough of Dewsbury was extended, and as the area now constituting the borough contained at the time of the last census a population exceeding 50,000, this town has been added to the list of 76 towns recently dealt with in these returns; its population in the middle of this year is estimated at 51,224. At the same date the newly constituted county borough of Stoke-on-Trent was substituted in these returns for the county borough of Hanley. The county borough of Stoke-on-Trent, as now constituted, includes, in addition to the county borough of Hanley, the late municipal boroughs of Burslem, Longton, and Stoke-upon-Trent, the urban district of Tunstall, and the greater part of that of Fenton. Thus the new county borough includes an estimated population of 245,726, among which pottery manufacture is the prevailing industry. These weekly returns will therefore, until further changes are rendered desirable by the results of next year's census, relate to 77 instead of 76 of the largest towns in England and Wales, having an aggregate population estimated to the middle of this year at 16,940,895 persons.

A SPECIAL meeting of the Royal Society of Medicine will be held on May 18th, at 5 P.M., at Morley Hall, George-street, Hanover-square, W., when Sir Almroth Wright, F.R.S., will open a discussion on Vaccine Therapy, its Administration, Value, and Limitations. The discussion will be continued on May 25th, June 1st, June 8th, and June 15th. The council has arranged for a number of Fellows to speak on the above days. Any Fellow who wishes to take part in the discussion is requested to communicate with the honorary secretaries.

Dr. Pestalozza of Rome and Dr. Martin of Geneva have been elected corresponding members by the Paris Academy of Medicine.

THE forty-third annual meeting of the Canadian Medical Association will be held in Toronto on June 1st, 2nd, 3rd, and 4th.

HEALTH OF ROTTERDAM.—Mr. Turing, the British Consul, reports that the population of Rotterdam on Dec. 31st, 1909, amounted to 417,783. The mortality rate in 1909 compared very favourably with that of the previous year, being 12·2 against 13·3 per 1000, and was the lowest ever recorded in the city. This very satisfactory condition was the more worthy of notice because of the fact that an outbreak of Asiatic cholera occurred on August 20th, resulting in 15 fatal cases. It was due to the energetic measures adopted by the municipal authorities that the course of the epidemic was so soon arrested, the last fatal case occurring on Sept. 4th. The outbreak was due to the drinking of impure water from the river, and this has led to the issue of orders by the town council instructing all owners and skippers of inland craft to provide themselves with supplies of filtered water from the municipal waterworks—a measure which will not only beneficially affect the large floating population, but will also tend to safeguard the health of the city generally.

THE ORIGIN, SCOPE, AND AUTHORITY OF THE BRITISH PHARMACOPŒIA.

By H. WIPPELL GADD, F.C.S.,
OF THE MIDDLE TEMPLE, BARRISTER-AT-LAW.

THE British Pharmacopœia is published under the direction of the General Council of Medical Education and Registration of the United Kingdom, pursuant to the Medical Acts, 21 & 22 Vict. Cap. XC. (1858) and 25 & 26 Vict. Cap. XCI. (1862).

Section LIV. of the Medical Act, 1858, enacted that:—

> The General Council shall cause to be published under their direction a Book containing a List of Medicines and Compounds, and the manner of preparing them, together with the true weights and measures by which they are to be prepared and mixed, and containing such other matter and things relating thereto as the General Council shall think fit, to be called "The British Pharmacopœia"; and the General Council shall cause to be altered, amended, and republished such Pharmacopœia as often as they shall deem it necessary.

The Medical Act, 1862, recited in its preamble and enacted, *inter alia*, as follows:—

> Whereas different Pharmacopœias have hitherto been in use in England, Scotland, and Ireland, published in England under the direction of the Royal College of Physicians of London, and sanctioned by an Order of Her Majesty in Council, published in Scotland under the direction of the Royal College of Physicians of Edinburgh, but without any legal sanction, and published in Ireland under the direction of the King and Queen's College of Physicians in Ireland, and sanctioned by Act of Parliament: And whereas the Pharmacopœia to be published by the said Council is intended to supersede the above-mentioned Pharmacopœias: And whereas it is expedient to incorporate the said Council, and to make such provisions as are hereinafter contained with respect to the said British Pharmacopœia: Be it enacted ..... the British Pharmacopœia, when published, shall for all purposes be deemed to be substituted throughout Great Britain and Ireland for the several above-mentioned Pharmacopœias.

The purpose of the British Pharmacopœia is well stated in the preface thereof:—

> It is intended to afford to the members of the medical profession and those engaged in the preparation of medicines throughout the British Empire one uniform standard and guide, whereby the nature and composition of substances to be used in medicine may be ascertained and determined.

In order to ensure that this purpose should be fulfilled, it was enacted by Section XV. of the Pharmacy Act, 1868 (31 & 32 Vict. c. 121) that:—

> Any person who shall ..... compound any medicines of the British Pharmacopœia except according to the formularies of the said Pharmacopœia, shall for every such offence be liable to pay a penalty or sum of five pounds .....

It should be noted that this does not provide a penalty for selling an improperly compounded medicine, but only for the wrongful compounding. This offence is obviously difficult to prove, and hence the provision has seldom, if ever, been used, and has become a dead-letter.

Another attempt to enforce by penalties the authority of the British Pharmacopœia was made in 1875, when the sixth section of the Sale of Food and Drugs Bill, as submitted to Parliament, read as follows:—

> No person shall sell any compound article of food which is not composed of ingredients in accordance with the demand of the purchaser, under a penalty of twenty pounds. No person shall sell any compounded drugs except the same shall be compounded in accordance with the demand of the purchaser, or with the prescription in writing of a registered medical practitioner, *or with the regulations prescribed by the British Pharmacopœia issued by the General Medical Council*, or in Great Britain with a basis to be laid down by the Council of the Pharmaceutical Society of Great Britain or the Privy Council, or in accordance with the provisions of the Pharmacy Act, 1868, or in Ireland in accordance with the Act of the Session of the thirty-third and thirty-fourth of Victoria, chapter 26, under a penalty of twenty pounds.

This clause was, however, entirely remodelled during the passage of the Bill through Parliament, and in the Act[1] all direct reference to standards is omitted, and the offence specified is that of selling any article of food or any drug which is not of the nature, substance, and quality of the article demanded by the purchaser.

It is true that in the sixth section of the Act it is provided that the offence of selling to the prejudice of the purchaser cannot be committed "where the food or drug is compounded as in this Act mentioned," but this proviso has been held to be meaningless and therefore inoperative. The point was raised in the case of Beardsley *v.* Walton and Co. (1900, 2 Q.B.D. 1), in giving judgment in which Channell, J., remarked: "There is nothing in the Act as to how drugs are to be compounded. The only way in which this omission

[1] Sale of Food and Drugs Act, 1875 (38 & 39 Vict., c. 63).

can be accounted for is that the Bill as originally drafted contained a definition of the expression 'compounded drugs' which was dropped out of it during its progress through Parliament, while the expression 'drug compounded as in this Act mentioned" was left in by an oversight. The result is that Subsection 3 of Section 6 has practically no operation."

In the course of their duties, perhaps no more difficult task confronts public analysts than that of finding a standard by which the quality and strength of substances submitted to them for examination can be gauged. The difficulty is in some degree met for certain food substances by regulations made by the Board of Agriculture, under powers conferred upon it by Section 4 of the Sale of Food and Drugs Act, 1899. Thus it is laid down that: "When a sample of milk ..... contains less than 3 per cent. of fat, it shall be presumed, ... until the contrary is proved, that the milk is not genuine." There is no such presumptive standard for drugs, but public analysts have very generally taken the British Pharmacopœia as a convenient guide, by comparison with the standards and descriptions of which they can gauge the quality of medicinal substances purchased by inspectors under the Sale of Food and Drugs Acts.

This use of the Pharmacopœia has been challenged in several contested cases, which I propose briefly to review. The earliest of these cases is White *v.* Bywater (1887, 19 Q.B.D. 582). In this a purchaser asked for some tincture of opium without specifying that he wanted it prepared according to the standard of the British Pharmacopœia. The seller supplied an article which on analysis was found to be deficient both in opium and spirit when compared with the tincture made as specified in the British Pharmacopœia. Evidence was given that tincture of opium was a well-understood term in the trade, and that the article sold by the defendant was not of the nature, substance, and quality of tincture of opium as understood by persons usually dealing in that article. It was held by Lord Coleridge, C.J., and A. L. Smith, J., that the respondent ought to have been convicted of an offence under Section VI. of the Sale of Food and Drugs Act, although the purchaser had not asked for tincture of opium prepared according to the standard of the British Pharmacopœia; and A. L. Smith, J., said: "Tincture of opium must mean the article known in commerce as tincture of opium. The thing supplied was not tincture of opium of commerce, but an inferior article."

In Dickins *v.* Randerson (1901, I.K.B. 437) a chemist managing a branch of Taylor's Drug Stores, Limited, was asked for "mercury ointment," and supplied an ointment containing 12·5 per cent. of mercury, whereas according to the formula in the British Pharmacopœia it should contain 48·5 per cent. Evidence was given to show that it was the usual practice amongst chemists to supply the weaker ointment unless the stronger variety was prescribed or specially asked for, and that the indiscriminate distribution of the official ointment would be a source of considerable public danger. The defendant was, however, convicted, and on appeal it was held by Bruce and Phillimore, JJ., rightly so. Phillimore, J., said: "If a drug is to be found in the Pharmacopœia, and if that drug is asked for, that drug must be supplied; and if it is not sold with the ingredients and in the proportions prescribed by the Pharmacopœia, there is at least *primâ-facie* evidence that what is sold is not of the nature, substance, and quality which was demanded."

In Boots, Cash Chemists (Southern), Limited *v.* Cowling (1903, 67 J.P. 195) the defendants sold liniment of soap, made with methylated spirit instead of with rectified spirit, as prescribed by the British Pharmacopœia. Liniment of soap is one of the few articles in the manufacture of which the Board of Inland Revenue allows methylated spirit to be used, and such methylated liniment is extensively sold, and being, of course, used externally only, is as efficient a preparation as the one made with rectified spirit. The defendants wished to call a number of witnesses to prove that there was a commercial standard for liniment of soap different from that of the British Pharmacopœia, but the magistrate refused to receive this evidence, holding that he was bound so to refuse by the decision in Dickins *v.* Randerson (*vide supra*). The defendants appealed to the Divisional Court, the appeal being heard by Lord Alverstone, C.J., and Wills and Channell, JJ., who decided that the evidence ought to have been received, but expressly refrained from giving any opinion as to its value, and sent the case back for rehearing. Lord Alverstone, C.J., said: "It was quite clear that Phillimore, J., never meant to lay down in that case (Dickins *v.* Randerson) that nothing could be looked at except the British Pharmacopœia. On the other hand, if it were a sale of some drug recognised by a special name in the Pharmacopœia a very strong *primâ-facie* case would be made out as to what the drug ought to contain. Any evidence, therefore, tendered to show that a commercial standard did exist different from that prescribed by the Pharmacopœia ought to be received. To say that no evidence of this kind was admissible, because of the decision in Dickins *v.* Randerson, was, in the opinion of the court, going too far." Subsequently the case was reheard by the magistrate, who, in spite of this evidence, convicted the defendants on the ground that the standard formula was that of the British Pharmacopœia, and that it had not been proved that there was any other commercial standard, nor was it reasonable to expect that there could be two commercial standards.

A singular case was that of Hudson *v.* Bridge (1903, 67 J.P. 186), in which the article sold was vinegar of squills, which was found to contain 2·5 per cent. of acetic acid, whereas it was alleged that it should have contained 4·27 per cent. of acetic acid. Obviously the acid is not the most active ingredient of this preparation, being rather the menstruum by which the potent drug squill is exhausted, and the vehicle in which it is exhibited. Moreover, evidence was given to the effect that some of the acetic acid is lost, as such, in the process of manufacture, and that a change takes place in the vinegar, even when carefully kept, which results in the further reduction of the quantity of free acetic acid present. The defendant was, however, convicted, but on appeal it was held that the justices were wrong. The Lord Chief Justice, in giving judgment, expressed his opinion that it was not material that the acetic acid had diminished, as the vinegar of squill as a drug was none the worse.

The general effect of these cases is, therefore, that when a compound medicine is demanded by a name which occurs in the Pharmacopœia, an article made in accordance with the formula, and answering the tests, if any, given in the Pharmacopœia, is presumed to be required, and that only very strong evidence to the contrary will suffice to rebut such presumption.

With regard to simple drugs there are few, if any, authoritative cases, and the question of the authority of the Pharmacopœia is complicated by the fact that many articles named therein have uses other than medicinal.

Thus in Fowle *v.* Fowle (1896, 75 L.T. 514) the defendant, a grocer, sold some beeswax which on analysis was found to contain about equal parts of true beeswax and paraffin. The magistrates dismissed the case on the ground that beeswax was not a drug, although evidence had been given before them to the effect that it is used in the preparation of substances for medicinal use and is included in the British Pharmacopœia. On appeal, the court (Grantham and Wright, JJ.) held that it is a question of fact for the justices to decide whether, in all the circumstances of each case, the article in question is a drug, and that in the circumstances of this case they were right in deciding that the beeswax was not a drug. "It was sold by a grocer at a little country shop. The grocer did not make it. He said he did not know what its constituents were. The justices were right." The implication apparently is, that if the sale had been made by a pharmacist the result might have been different.

A further difficulty arises from the fact that many of the standards of the Pharmacopœia for crude drugs are restrictive rather than absolute; that is to say, they are framed to include not all normal genuine samples but only certain selected ones. Thus, opium of the British Pharmacopœia is not simply "the juice obtained by incision from the unripe capsules of Papaver somniferum," but only such juice as when dried yields a powder, which on being tested by the official method is found to yield approximately 10 per cent. of anhydrous morphine. When this standard was first established there was some outcry amongst drug merchants to the effect that it would have the result of lowering the quality of commercial supplies; but the General Medical Council has nothing to do, at least directly, with the exigencies of commerce, and the establishment of a restrictive standard for opium achieved the desideratum of ensuring a uniform product for medicinal purposes. On the other hand, the Pharmacopœial monograph for rosemary oil excludes by its

characters and tests the Spanish variety. But pure rosemary oil comes from Spain in enormous quantities and is of the very greatest service to soap manufacturers, besides being used for many other non-medicinal purposes, and there is no reason why the paramount duty of securing uniformity in therapeutic agents should involve hardship upon legitimate users of such for industrial and commercial purposes.

A little consideration will show that the General Medical Council cannot take general names and apply them to particular varieties any more than a manufacturer or dealer can appropriate ordinary English words to special proprietary brands. Thus, aconite root of the Pharmacopœia is "the root of aconitum napellus, collected in the autumn from plants cultivated in Britain and dried," but it would degrade the English language and confuse botanical science if it were insisted that the words "aconite root" might not properly be applied to roots of other species of the genus *Aconitum*, which have been collected at other times of the year and in other countries.

It should be made quite clear in the next edition of the Pharmacopœia that the standards laid down therein are for medicinal substances, when sold as such, alone. Pending this, each case will have to be decided on its merits, but it may safely be assumed that any drugs mentioned in the Pharmacopœia when sold for medicinal purposes should conform to the standards, descriptions, and tests of the Pharmacopœia, provided always that these are consistent *inter se*.

CENTRAL MIDWIVES BOARD.

SPECIAL meetings of the Central Midwives Board were held at Caxton House, Westminster, on April 19th and 20th, Dr. F. H. CHAMPNEYS being in the chair.

The following midwives were struck off the roll: Margaret Barnett, Esther Farrall, Mary Ann Neale, and Elizabeth Williams, that being in attendance as midwives at confinements, the children suffering from inflammation of the eyes, the midwives did not explain that the cases required the attendance of registered medical practitioners, nor did they hand to the nearest relatives or friends present the form of sending for medical help, properly filled up and signed, in order that these might be immediately forwarded to medical practitioners as required by Rule E 19 (5). Henrietta Chinn, that being in attendance as a midwife at a confinement she was uncleanly in person, house, clothing, and appliances. Margaret Davies and Esther Letherin for drunkenness. Annie Hardstaff, that being in attendance as a midwife at a confinement, the child suffering from inflammation about the navel, she did not send for a medical man. Margaret Middlemiss, that being in attendance as a midwife at a confinement, the presentation being abnormal, she did not send for a medical man. Sarah Timson, that having received a written direction from Dr. Arthur B. King, medical officer of health of the urban district of Watford, to discontinue attendance at any confinements for one week, and to disinfect herself, her clothing, and her appliances to the satisfaction of the local supervising authority, on account of one of her children suffering from diphtheria, she nevertheless attended three confinements during the five days following the receipt of Dr. King's direction, without having undergone adequate disinfection. Mary Weddell, that being in attendance as a midwife at a confinement, the patient suffering from excessive bleeding before the birth of the child, she did not send for a medical man. Elizabeth White, that being in attendance as a midwife at a confinement, the child having been born apparently dead, she made no effort to carry out any method of resuscitation. Mary Backhouse, that being in attendance as a midwife at a confinement and present on the occurrence of rigor she did not take the patient's temperature nor send for a medical man. Sarah Beeston, that being in attendance as a midwife at a confinement, the lochia being persistently offensive from the first, she did not send for a medical man. Ann Foley, that being in attendance as a midwife at a confinement, the patient suffering from severe rigor and sickness, and subsequently from abdominal pain and constant sickness, she did not send for a medical man. Frances Rebecca Llewellyn, that having been engaged as a midwife at a confinement, the patient suffering from recurrent hæmorrhages, she did not send for a medical man. Susanna Thomas, that without reasonable excuse and with intent to evade supervision, she persistently refused to submit her bag and appliances for inspection by the duly appointed officer of the local supervising authority.

The following midwives were cautioned after charges against them had been considered: Elizabeth Baverstock, Adelaide Harker, Arabella Matilda Hopton, Sarah Jane Long, and Sarah King.

Elizabeth Mary Dean, Elizabeth Hill, Hannah Howe, Elizabeth Wilding, Elizabeth Anderson, Mary Frankham, Alice Turner, and Sarah Wainwright were censured after charges alleged against them had been considered.

An ordinary meeting of the Board was held on April 21st, Dr. CHAMPNEYS being in the chair.

A letter was read from Dr. H. Scurfield, medical officer of health of Sheffield, in which he observed that "as midwifery is neither medicine nor surgery he did not know whether it would be considered 'covering' for a medical man to keep an unqualified dispenser who attended midwifery cases." Dr. Scurfield also pointed out that it did not appear from Section 1 of the Midwives Act, 1902, that it was an offence for an unqualified male midwife to undertake midwifery. The Board directed the secretary to reply that the best course for Dr. Scurfield to follow would be to apply to the General Medical Council.

A letter was considered from a certified midwife advertising a patent medicine. The Board decided that the midwife be informed that if she does not forthwith discontinue the use of the letters C.M.B. affixed to her name and the advertising of the patent medicine she will be cited to appear before the Board.

Letters were read from the inspector of midwives for Norfolk as to the period of suspension of a midwife to which the Board had taken exception.[1] The Board decided that the local supervising authority be informed that no suspension should be for a longer period than is necessary for adequate disinfection.

The Board having considered the procedure on application to be certified under Rule B. 2, and the fee to be charged, decided: (1) that the form of application, and the certificate in support thereof, be the same as used in similar applications down to March 31st, 1905; (2) that the fee payable be 1 guinea; and (3) that the grant of a certificate without requiring training or examination be limited to those who have been practising, and desire to continue to practise, as midwives in England and Wales.

Dr. Champneys was unanimously re-elected Chairman of the Board for the year ending March 31st, 1911.

MEDICINE AND THE LAW.

The Sale of Poisons and the Name of the Seller.

THE Divisional Court recently heard an appeal against the conviction of a druggist by a magistrate at a London police court for selling poison in a bottle upon the label of which his name did not appear. The point at issue in the case was whether the provisions of Section 17 of the Pharmacy Act, 1868, were satisfied by the use on the label of the trade name of the defendant, whose surname was Edwards, but who carried on business under the name of Godfrey. The Pharmaceutical Society, the prosecutors in the case, contended that the true name of the seller must be used, the words of the section being "the name and address of the seller." The court, after listening to counsel on both sides, allowed the appeal and quashed the conviction, the Lord Chief Justice in doing so saying that the object of the Pharmacy Act in imposing regulations to govern the sale of poisons was to protect the public, and that in providing for the keeping of records of the sale, including the signature of the purchaser, it was intended that it should be possible to trace the poison to the address where it was sold. He was of the opinion, therefore, that where a trade name was used "the name of the seller" would be the name under which the sale was effected. He pointed out that it had been held that a corporation could sell poisons and was liable to prosecution if in doing so it did not comply with the section. In the case before the court Mr. Edwards traded under the name of Godfrey, and

[1] THE LANCET, March 26th, p. 898.

it was a proper compliance with the section to place the name of Godfrey on the label. His lordship recognised the care which the magistrate had devoted to the consideration of the case, but was of opinion that the conclusion at which he had arrived was a wrong one. Mr. Justice Bray and Mr. Justice Pickford agreed with Lord Alverstone in allowing the appeal.

THE MEDICAL TREATMENT OF LONDON SCHOOL CHILDREN.

Provision in Wandsworth.

THE Education Committee of the London County Council on April 27th had under consideration further arrangements for the medical treatment of children in districts remote from hospitals. The medical practitioners of Wandsworth submitted a scheme, similar to those already approved for Hampstead and Norwood, for the treatment of children in their district. It was proposed to make arrangements for 1500 cases—500 ear, nose, or throat, and 1000 eye and ringworm cases. The payment for the former would be on the basis of £50 per annum for each medical man working one half day a week, and a capitation fee of 2*s*. Arrangements were to be made for the treatment of ringworm cases at the respective surgeries of the medical men at an inclusive fee of 17*s*. a case. The scheme was approved, but as it was discovered that no provision had been made in this or the other schemes submitted by medical practitioners for reports to the Council as to the results of treatment, the chairman of the committee promised to come to some arrangement. In the case of the hospitals, Mr. Jackson said, results were being tabulated.

The Hampstead Experiment.

The Children's Care Committee reported that the period during which the Hampstead Council of Social Welfare agreed to provide treatment for school children in Hampstead came to an end in March, 167 children having received medical attention. An expression of thanks had been conveyed to those responsible for the experiment. The committee passed no verdict on the experiment, which, of course, has been superseded by the arrangements entered into with the local medical men.

Withdrawal of the Westminster Ophthalmic Hospital.

The governing body of the Royal Westminster Ophthalmic Hospital wrote on March 3rd withdrawing the offer, accepted by the Council at the end of last July, to provide for one year treatment for 2000 children a year, free of charge to the Council. The arrangements were put into operation from August 23rd, 1909. In notifying their withdrawal the governing body expressed their willingness to consider any suggestions the Council might make. The committee understood that the hospital authorities would be prepared to continue treatment in return for financial aid. In view, however, of the proximity of the Royal Westminster Ophthalmic Hospital to Charing Cross Hospital, where provision had been made for 1000 cases, and to the provision made at other neighbouring hospitals, the committee thought it would not be possible at present to ensure that sufficient cases would be available to justify a financial agreement being entered into. They, therefore, recommended that the hospital authorities be thanked and informed accordingly, and this was agreed to.

British Medical Association's Protest.

The Children's Care Committee reported the receipt of a letter, dated March 8th, from the British Medical Association protesting against the arrangements made by the Council with the hospitals for medical treatment, and stating that the experience of medical practitioners showed the insufficiency of inquiries by hospital almoners to establish in all cases the ability or inability of parents to pay for treatment. The committee had informed the Association that the Council's plan, before children were referred to hospitals, was that local care committees and head teachers should satisfy themselves that the cases were suitable for hospital treatment. There was therefore a double check against the abuse of hospitals.

Assistant School Doctorships Vacant.

The Education Committee decided to advertise inviting applications to fill vacancies for 24 assistant school doctors. Hitherto it has been mentioned in the advertisements that promotions to the posts of school doctors would be made from among the assistant school doctors, but in order to preserve freedom of action the committee decided to omit the statement. Under the scheme adopted in November, 1908, holders of appointments as school doctors or assistant school doctors are not eligible for reappointment after three years' service.

Finance Committee and Dental Treatment.

In introducing the annual estimates of income and expenditure at the meeting of the London County Council on April 26th Mr. Hayes Fisher, chairman of the Finance Committee, prophesied the continued rise of the education rate owing to the cost of teachers' salaries, the feeding of necessitous children, and medical inspection and treatment. In respect of the latter £21,000 had been included in the present estimates. Nothing had been included in respect of dental treatment, but they must expect such an item in future estimates.

Looking Back.

FROM

THE LANCET, *SATURDAY*, April 28th, 1832.

ROYAL INSTITUTION OF GREAT BRITAIN.

STRUCTURE AND FUNCTIONS OF THE INFUSORIA.

On the 6th instant Mr. THOMAS BELL read a paper on the structure and functions of the *infusoria*, a class of animalcula discovered with the aid of powerful lenses in animal and vegetable infusions. Until very recently the most perfect microscopes were incapable of showing more of these minute beings than their mere existence. They were supposed to have no proper form, and their spherical shape was said to be due to the pressure of the surrounding medium. These creatures were first discovered by Lewenhoeck. His researches were ingeniously followed by La Marque and his followers, who, with singular daring, endeavoured to apply the new facts to the construction of a scheme of necessity in the organization of living beings. These vivacious dots or monads were supposed to be the ultimate elements of animate bodies, and to supply by their aggregation the materials of every form of life. The late discoveries of the German physiologists have effected a signal overthrow of these doctrines, for these apparently indivisible points have by means of improved instruments been proved to possess a complete organization, as difficult to be accounted for by the hypothesis of necessity as the human frame itself. This end was obtained by the simple expedient of feeding the animalcules with coloured liquids. A solution of pure indigo is the most eligible fluid, and great caution is requisite to prevent the introduction of any metallic or medicinal pigment, for their destruction would be the immediate consequence, and the desired results could not be obtained. These precautions taken, a variety of appearance was observed in the hitherto seemingly homogeneous globules. In some, numerous spots became evident; these are the digestive cavities or stomach; others present a different character, and one digestive cavity alone is exhibited. The observer succeeded in detecting a mouth and an anus, and the rudiments even of a nervous system were perceived. The first and most simple class is named *polygastrica*, from the great number of stomachs; the second and more complicate is denominated *rotatoria*, from the nature of their movements. Relating to the functions of this second class, numerous facts of great interest were ascertained. They were found to exhibit all the principles of reproduction exemplified in other animals. When divided, each part, as in the planaria genus, became a perfect animal. The propagation by germ or bud was also frequently exemplified, and their ovicula had been distinctly demonstrated. The interest of these researches will be enhanced, when it is stated, that these objects are so minute, that the space occupied by a single drop of distilled water is adequate to contain no less than five hundred millions, and that a cubic inch would include *eight hundred thousand millions*, a number a thousand times greater than

that representing the population of the globe. Mr. Bell appended some remarks on the tendency which the rash explication of natural phenomena, by a principle of necessity, especially in animated nature, has to debase the character of philosophy, and to deprive the mind of that exalted pleasure which it derives from the contemplation of infinite design.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In 77 of the largest English towns 8195 births and 4467 deaths were registered during the week ending April 23rd. The annual rate of mortality in these towns, which had steadily increased in the five preceding weeks from 13·5 to 15·0 per 1000, declined again to 13·7 in the week under notice. During the first three weeks of the current quarter the annual death-rate in these towns averaged 14·5 per 1000; in London the mean rate during the three weeks did not exceed 14·2 per 1000. The lowest recorded annual rates of mortality during last week in these 77 towns were 5·7 in Burton-on-Trent, 6·5 in Handsworth, 6·6 in Walthamstow, and 7·7 in York; the rates in the other towns ranged upwards, however, to 19·8 in Liverpool, 20·3 in Merthyr Tydfil, 20·6 in Preston, and 21·3 in Oldham. In London the recorded death-rate last week did not exceed 13·1 per 1000. The 4467 deaths registered last week in the 77 towns showed a decline of 405 from the number in the previous week, and included 345 which were referred to the principal epidemic diseases, against 333, 362, and 383 in the three preceding weeks; of these 345 deaths, 143 resulted from whooping-cough, 97 from measles, 40 from diarrhœa, 29 from diphtheria, 27 from scarlet fever, and 9 from enteric fever, but not one from small-pox. The mean annual rate of mortality in the 77 towns from these epidemic diseases during the week was equal to 1·1 per 1000, against 1·1 and 1·2 in the two preceding weeks. No death from any of these epidemic diseases was registered last week in Leicester, Walthamstow, Norwich, Hornsey, or in eight other smaller towns; the annual death-rates therefrom ranged upwards, however, to 2·9 in Liverpool, Rochdale, and Stockton-on-Tees, 3·1 in Devonport, and 3·3 in Merthyr Tydfil. The fatal cases of whooping-cough in the 77 towns, which had been 151 and 143 in the two previous weeks, were again 143 last week; they caused annual death-rates equal to 1·3 in Birkenhead and in South Shields, 1·4 in Liverpool, 2·2 in Bootle, and 2·5 in Devonport. The 97 fatal cases of measles showed a decline of 20 from the number in the previous week; the highest death-rates from this disease last week were 1·3 in East Ham, 1·5 in Stoke-on-Trent, 1·8 in Bradford, and 2·6 in Merthyr Tydfil. The 40 deaths attributed to diarrhœa considerably exceeded the numbers in recent weeks. The deaths from diphtheria, which had been 35 and 39 in the two preceding weeks, declined to 29 last week and were fewer than in any previous week of this year; 9 occurred in London and its suburban districts and 2 each in Birkenhead, Manchester, Rochdale, and Preston. The 27 fatal cases of scarlet fever included 10 in London and its suburban districts, 3 in Liverpool and in Sunderland, and 2 in Manchester. Only 9 deaths in the 77 towns were last week referred to enteric fever and were fewer than in any previous week of this year. The number of scarlet fever patients under treatment in the Metropolitan Asylums and in the London Fever Hospital, which had steadily declined in the 27 preceding weeks from 2819 to 1535, had further fallen to 1510 on April 23rd; 196 new cases of this disease were admitted to these hospitals during last week, against 166 and 197 in the two preceding weeks. The Metropolitan Asylums Hospitals contained no case of small-pox on Saturday last. Of the 1226 deaths registered in London during the week under notice 277 were referred to pneumonia and other diseases of the respiratory system, showing a decline of 35 from the number returned in the previous week; these deaths were 43 below the corrected average number in the corresponding week of the five years 1905–09. The causes of 35, or 0·8 per cent., of the deaths registered in the 77 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death registered during the week were duly certified in Manchester, Leeds, Bristol, West Ham, Bradford, Newcastle-on-Tyne, Nottingham, and in 53 other smaller towns; the 35 uncertified causes of death in the 77 towns included 7 in Birmingham, 4 in Liverpool and in Gateshead, and 3 in Stoke-on-Trent.

HEALTH OF SCOTCH TOWNS.

In eight of the principal Scotch towns 969 births and 590 deaths were registered during the week ending April 23rd. The annual rate of mortality in these towns, which had been equal to 18·1, 18·2, and 18·5 per 1000 in the three preceding weeks, declined to 16·3 in the week under notice. During the first three weeks of the current quarter the death-rate in these towns averaged 17·7 per 1000, and exceeded by 3·2 the mean rate during the same period in the 77 largest English towns. The annual death-rates last week in these eight Scotch towns ranged from 7·8 and 13·2 in Leith and Aberdeen to 26·1 in Dundee and 26·2 in Greenock. The 590 deaths from all causes in the eight towns during last week showed a decline of 79 from the number in the previous week, and included 87 which were referred to the principal epidemic diseases, against 123 and 97 in the two preceding weeks. These 87 deaths were equal to an annual rate of 2·4 per 1000; the mean death-rate from the same diseases in the 77 English towns last week did not exceed 1·1 per 1000. These 87 deaths in the Scotch towns last week included 59 from measles, 16 from diarrhœa, 6 from whooping-cough, 4 from diphtheria, and 1 each from scarlet fever and "fever," but not one from small-pox. The fatal cases of measles, which had been 74 and 64 in the two preceding weeks, further declined last week to 59, which included, however, 24 in Dundee, 18 in Glasgow, 9 in Greenock, and 7 in Edinburgh. The 16 deaths attributed to diarrhœa exceeded the number in the previous week by 1; 7 occurred in Glasgow, 3 in Edinburgh, and 2 both in Dundee and in Aberdeen. The 6 fatal cases of whooping-cough corresponded with the number in the previous week, and included 2 in Glasgow and in Dundee. Three of the four deaths from diphtheria, showing a considerable decline from the numbers in recent weeks, were returned in Glasgow. The fatal case of scarlet fever and that referred to "fever" occurred in Glasgow; the death from "fever" was certified as cerebro-spinal meningitis. The deaths in the eight towns referred to diseases of the respiratory system, which had been 114 and 126 in the two preceding weeks, declined to 92 in the week under notice, and were 26 below the number in the corresponding week of last year. The causes of 10, or 1·7 per cent., of the deaths in the eight towns last week were not certified or not stated; in the 77 English towns the proportion of uncertified causes of death did not exceed 0·8 per cent.

HEALTH OF IRISH TOWNS.

In 22 town districts of Ireland, having an estimated population of 1,151,790 persons, 643 births and 494 deaths were registered during the week ending April 23rd. The mean annual rate of mortality in these towns, which had been equal to 23·2 per 1000 in each of the two preceding weeks, declined to 22·4 in the week under notice. During the first three weeks of the current quarter the annual death-rate in these Irish towns averaged 22·9 per 1000, whereas the mean rate during the same period did not exceed 14·5 in the 77 largest English towns, and 17·7 in the eight principal Scotch towns. The annual death-rate during last week was equal to 24·3 in Dublin, 21·3 in Belfast, 23·3 in Cork, 13·2 in Londonderry, 19·1 in Limerick, and 29·2 in Waterford; the mean annual death-rate last week in the 16 smallest of these Irish town districts was equal to 22·3 per 1000. The 494 deaths from all causes in the 22 town districts last week showed a decline of 18 from the number in the previous week, and included 41 which were referred to the principal epidemic diseases, against 26, 34, and 39 in the three preceding weeks; these 41 deaths were equal to an annual rate of 1·9 per 1000; in the 77 English towns the mean rate from the same diseases last week did not exceed 1·1 per 1000, while in the eight Scotch towns it was equal to 2·4. The 41 deaths from these diseases in the Irish towns last week included 17 from whooping-cough, 9 from measles, 6 from diarrhœa, 4 from diphtheria, and 5 from "fever," but not one either from scarlet fever or small-pox. The fatal cases of whooping-cough in the 22 towns, which had been 15 and 9 in the

two previous weeks, rose again to 17 last week, of which 5 occurred in Dublin, 8 in Belfast, and 2 in Drogheda. The 9 deaths from measles were, however, fewer by 8 than the number in the previous week; they included 8 in Belfast. Of the 6 deaths attributed to diarrhœa, 3 occurred in Belfast and 2 in Dublin; and 2 of the 4 deaths from diphtheria were also returned in Dublin. A fatal case of typhus was registered both in Waterford and in Galway; and one each of enteric fever in Belfast and in Portadown. The deaths in the 22 towns referred to pneumonia and other diseases of the respiratory system, which had been 129 and 121 in the two preceding weeks, further declined to 118 last week. The causes of 15, or 3·0 per cent., of the deaths registered in the Irish towns last week were not certified; in the 77 English towns the proportion of uncertified causes of death last week did not exceed 0·8 per cent., and in the eight principal Scotch towns it was equal to 1·7 per cent.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet-Surgeons: C. L. W. Bunton to the *Suffolk*, on recommissioning, and E. F. Mortimer to the *Carnarvon*, on recommissioning. Staff Surgeons: L. A. Baiss to the *Prince George* (temporarily), and S. T. Reid to the *Antrim*, on recommissioning. Surgeons: W. Bastian to the *Bacchante*, on recommissioning; J. E. Johnston lent to the *Circe*, temporarily; H. F. Briggs to the *Leander*; F. G. Hitch to the *Suffolk*, on recommissioning; G. F. Syms to the *Exmouth*; H. A. Kellond-Knight to the *Bellerophon*; J. H. Wright to the *Bulwark*, additional.

ARMY MEDICAL SERVICE.

Surgeon-General Philip M. Ellis retires on retired pay (dated April 23rd, 1910). Colonel James G. MacNeece to be Surgeon-General, vice P. M. Ellis (dated April 23rd, 1910).

ROYAL ARMY MEDICAL CORPS.

The under-mentioned Lieutenants, from the Seconded List, are restored to the establishment (dated April 1st, 1910):—Frederick R. Laing and John T. Simson.

Colonel W. G. Macpherson, C.M.G., from the London District, has been appointed Principal Medical Officer at Malta. Lieutenant-Colonel T. J. O'Donnell, D.S.O., from Quetta, has been appointed to command the station hospital at Aden. Lieutenant-Colonel C. E. Nichol, D.S.O., lately commanding the Royal Army Medical Corps Depôt and School of Instruction at Aldershot, has been appointed to command the station hospital at Maymyo. Lieutenant-Colonel W. C. Beevor, C.M.G., from Dalhousie, has joined at Bangalore. Major C. T. Samman, from Shorncliffe, has been appointed to command the station hospital at Dinapore. Major J. Grech, from Meerut, has been posted to the Western Command. Major E. M. Williams, from Fermoy, has embarked for India. Major H. J. Parry, D.S.O., from Pietermaritzburg, has been transferred to the home establishment and posted to the Southern Command. Major M. M. Lowsley has been transferred from Secunderabad to Ambala. Major F. J. Wade-Brown has taken up duty in the Cork District. Captain M. C. Wetherell has been appointed a Specialist in Electrical Science to the Seventh (Meerut) Division. Captain W. B. Fry, on arrival in Egypt, has been posted for duty under the Soudan Government and granted the local rank of Bimbashi. Captain F. C. Lambert, from Cape Town, has been posted to Cosham; and Captain P. J. Hanafin, from Wynberg, has been posted to the Southern Command. Captain W. MacD. MacDowall has been transferred from Buttevant to Devonport. Captain G. Baillie has embarked for a tour of service on the West Coast of Africa. Lieutenant A. L. Stevenson has been transferred from Dublin to the Curragh. Lieutenant C. E. L. Harding has been attached to the station hospital at Purandhur. Lieutenant M. Leckie has arrived in Egypt for a tour of service with the Egyptian Government.

INDIAN MEDICAL SERVICE.

Colonel D. ffrench Mullen, Deputy Principal Medical Officer, His Majesty's Forces in India, has been granted eight months' combined leave out of India. Major P. Dee has arrived home on leave. The services of Captain J. M. A. Macmillan have been placed permanently at the disposal of the Honourable the Chief Commissioner of the Central Provinces. Captain J. H. Burgess has been granted one year's leave out of India, and Captain A. Murphy, Medical Officer of the 103rd Mahratta Light Infantry, has been granted eight months' leave. Captain C. Barnes has arrived home on leave.

SPECIAL RESERVE OF OFFICERS.

Royal Army Medical Corps.

The undermentioned Lieutenants (on probation) are confirmed in that rank:—George Rollason, W. H. L. McCarthy, Ian D. Dickson, J. M'G. Scott, T. E. Guthrie, W. T. Graham, and C. S. Sandeman.

TERRITORIAL FORCE.

Royal Army Medical Corps.

1st South Midland Field Ambulance: Edward James Boome to be Lieutenant (dated Feb. 19th, 1910).

1st Scottish General Hospital: Captain Peter Mitchell, from the 1st Highland Field Ambulance, Royal Army Medical Corps, to be Captain (dated Feb. 1st, 1910). Captain Peter Mitchell to be Major (dated April 2nd, 1910).

4th Northern General Hospital: Captain Francis B. Cooper resigns his commission (dated Sept. 24th, 1909). Frank Alcock to be Captain, whose services will be available on mobilisation (dated Feb. 14th, 1910).

For attachment to Units other than Medical Units.—Thomas Hamilton Ward to be Lieutenant (dated March 1st, 1910). Lionel Henry Moiser to be Lieutenant (dated March 11th, 1910). William Townsend Storrs to be Lieutenant (dated Feb. 21st, 1910). Surgeon-Captain Frederick William Johnson, from the 8th Battalion, The Sherwood Foresters (Nottinghamshire and Derbyshire Regiment), to be Captain, with precedence as from August 4th, 1906 (dated Feb. 25th, 1910).

Attached to Units other than Medical Units.—Lieutenant Walter G. Paget to be Captain (dated Feb. 25th, 1910).

BRITISH RED CROSS SOCIETY.

In the Lord Mayor's Parlour of the Town Hall, Manchester, on April 22nd, a meeting was held for the purpose of forming a Manchester branch of the society.

Sir Frederick Treves delivered an address to the Westminster Branch of the British Red Cross Society at the Westminster City Hall on April 20th. The Duchess of Fife, who is the president of the branch, has nominated the Mayoress, Mrs. F. Harcourt Hillersdon, as a vice-president.

THE KING'S BIRTHDAY.

Notice is given in the *London Gazette* that the King's Birthday will be celebrated in London and at all Home Stations on Friday, June 24th next. At all other stations His Majesty's Birthday will be celebrated on Wednesday, Nov. 9th next.

COTTAGE HOSPITALS AT WIMBLEDON.—At the fortieth annual meeting of the North Wimbledon Cottage Hospital subscribers, held on April 23rd, Mr. J. F. Schwann, J.P., chairman of the committee, made an important statement as to the attitude of that institution in regard to the difficulty at present occupying much attention as to hospital matters in the borough. For years the council of the South Wimbledon Cottage Hospital has been urging an amalgamation with the North Wimbledon Cottage Hospital and the erection of a central hospital, the two present small hospitals being a considerable distance from the centre of the town. Many lively meetings have been held, but no agreement has been arrived at; and after being denied 16 sites through opposition from neighbours the council of the South Wimbledon institution has resolved to build a new hospital for 24 beds at The Rush, Merton, outside the borough, and still farther away from the middle of the town; while the North Wimbledon committee has resolved to extend the hospital at Copse Hill. Mr. Schwann on Saturday greatly deplored the decision of the South Wimbledon committee, and said he would have preferred that the funds and interests were combined and a large hospital built on the site at North Wimbledon, a receiving-room only being kept up in South Wimbledon. He reviewed the negotiations and said he had been strongly in favour of one hospital, but this was now out of the question. The report presented showed that 259 patients had been treated during the year, and there were 100 operations, the highest numbers yet recorded.

Correspondence.

"Audi alteram partem."

FEMALE HÆMOPHILIACS AND *DE NOVO* CASES OF HÆMOPHILIA.

To the Editor of THE LANCET.

SIR,—The new iatro-mathematical school comes as a wild nor'-easter to brace us into better mental health and habits. It was really delightful to hear Dr. Bulloch belabour the physicians at the Medical Society, and that I had myself to kiss the chastening rod added not a little to the enjoyment of the evening.

I would like to say a word or two on the question of female hæmophiliacs and the *de novo* cases. Dr. Bulloch thinks it extremely unlikely that any of the female cases are genuine. It is very difficult not to accept the following: A girl, aged 19, was admitted Nov. 16th, 1897, with epistaxis and purpura. The patient is one of three children, of whom one boy, aged 12, has always bled excessively when cut, has bled from the nose at intervals, and three weeks ago had purpura. The father had frequent epistaxis as a boy, and is now living and well; the mother is healthy and there are no bleeders known in her family. One of the father's brothers had frequent epistaxis; of his children, a son, aged 20, has had profuse epistaxis, and a few weeks ago he bled for two hours. Of course, such a history would not be regarded by Dr. Bulloch as very conclusive, and yet it shows a marked tendency to hæmorrhage. The girl herself has always bled freely when cut, when the teeth were drawn, or even when the gums were rubbed hard. A year ago she had soreness and swelling of both the shoulder-joints. She has had no menstrual irregularities. On Oct. 3rd she began to have epistaxis, which has continued at intervals ever since; at the same time she had bleeding from the gums. Hæmorrhages into the skin were noted about Nov. 1st. Her blood coagulation-time ranged from 10 to 15 minutes. In spite of all known methods of treatment the bleeding recurred at intervals, and successive crops of cutaneous hæmorrhage, and she died on Nov. 30th.

Was this a true hæmophiliac, or only an aggravated case of purpura hæmorrhagica in a family with marked tendency to epistaxis? The latter would no doubt be Dr. Bulloch's view. One has to recognise that purpura in severe forms may occur in several members of a family. I have notes of a case seen with Dr. F. H. Smith, a woman aged 63, whose mother died from purpura, and the patient's twin sister died from the same disease; there had been no other cases in the family.

There is a chronic purpura which must not be mistaken for hæmophilia. Miss E., aged 46, seen with Dr. Mary Sherwood, began to have epistaxis at her eleventh year. Every few months for the next five years she had severe attacks, almost always accompanied with crops of purpura. When about 26 years old the attacks of epistaxis ceased and she has only had two short attacks in the last 20 years. She does not think that for years she has ever been entirely free from spots of purpura, chiefly small scattered petechiæ. She bruises easily, and the slightest abrasion is followed by hæmorrhage, but she has never bled from the gums. I saw her in a severe attack of epistaxis, and the following day she had an enormous extravasation of blood involving the greater part of the skin of the front and outer side of the right arm.

As to the *de novo* origin, I mentioned in the discussion how important it is to look carefully into the family history, as the patients may deny knowledge of the peculiarity or they may not know the collateral history.

There is an Oxford bleeder, G. C., who has frequently been admitted to the infirmary, among whose ascendants it does not seem possible to trace any similar cases. He and his brother were bleeders from childhood—spontaneously, from slight cuts, and bruises. Both have been greatly troubled with the joint lesions. The brother died from tuberculosis at 26. The patient whom I saw the other day must be regarded as a bleeder. The tendency began about his second year; he has had frequent attacks of epistaxis, and on three occasions he nearly died from accidents—once when he "mashed" his finger in the door, the second occasion a cut on his right forefinger, and the third he accidentally scratched the roof of his mouth. He has also had three attacks of severe abdominal pain with vomiting of blood and melæna. He has been greatly troubled with swellings of the joints, which have come on at the time of the hæmorrhages, and the skin about them has been blood-stained. He is only just recovering from an attack in the ankles. He has small hæmorrhages into the muscles which leave little nodular thickenings, one of which is just disappearing from the left biceps. Three months ago he had to have a tooth taken out, and he bled at intervals for 12 days. The patient's mother died from tuberculosis; none of his brothers were bleeders; the maternal grandmother and grandfather not known, but the patient's father, an intelligent man, has never heard of any bleeders either in his wife's family or in his own.

I am, Sir, yours faithfully,

April 25th, 1910. WILLIAM OSLER.

A DANGEROUS DRY SHAMPOO.

To the Editor of THE LANCET.

SIR,—The danger of the dry shampoo with commercial carbon tetrachloride containing carbon bisulphide, thereby increasing its poisonous properties, has been so far established that any further fatal accident will result in a criminal prosecution. Before the inquiry into the above matter had been completed an immediate death in a hairdressing establishment resulted from the ignition of an inflammable mixture of air and vapour of petrol purchased from a neighbouring garage. It might have been expected that even if the use of such dangerous materials had not been stopped by legislation the public would have been sufficiently warned. One reads with surprise the following passage in a modern society paper:—

> The first thing to be done is to give it [the hair of a pretty girl] a dry shampoo; the best thing to use for this purpose being gasolene, which is not so very dangerous provided reasonable care is taken, which includes, of course, performing the operation in daylight. It is also a good plan to stop up the ears with cotton-wool, as some people are apt to find that *it* affects their hearing.

With regard to the above sentence, which has been copied exactly, it is desirable to point out that gasolene, properly so-called, sp. gr. at 15° C. = 0·66, cannot be purchased by the public, as its use for any general purpose has been strictly prohibited owing to its giving off an inflammable vapour even below ordinary room temperature, say 15° C., or 60° F. It must therefore be supposed that some other kind of petrol must be meant, which may be sold under a copied name; but there does not appear to be any guarantee that the flash-point of the article so supplied has been determined, nor that "reasonable care" would be taken even in daylight. A lighted match or even a cigarette end might, and probably would, produce a conflagration.

It is further presumed that the word "it" (the italics are those of the present writer) must refer to the gasolene and not to the cotton wool. If so, then the admission that the vapour of the gasolene affects the auditory apparatus, probably the membrana tympani, appears a sufficient condemnation; it would clearly require a very tightly-fitting plug of cotton wool to exclude all vapour. It may be pointed out that for cleansing hair, long or short, the old text ἄριστον μὲν ὕδωρ—"Water is the best"—still remains uncontroverted.

I am, Sir, yours faithfully,

April 25th, 1910. V. H. VELEY, F.R.S., D.Sc.

THE MIDWIVES BILL AND POOR-LAW RELIEF.

To the Editor of THE LANCET.

SIR,—A somewhat interesting discussion is being published in your columns on this subject. It might prove of interest to your readers and instructive to Mrs. Sidney Webb if I give two personal experiences of calls attended in the last year. Early in 1909 the Newbury board of guardians (owing to the difficulty found in getting practitioners to attend cases when summoned by a Central Midwives Board call) issued a notice to all legally qualified persons that the Board would pay in cases where such calls had been issued fees in accordance with the Poor-law scale. In August last, at 12 midnight, I received a C.M.B. call to Weston (six and a half miles), one of the villages under the control of the Newbury board.

This was sent to me as the nearest available practitioner. I attended and applied forceps under chloroform. Notice of the call was sent at the time to the guardians. The account was furnished in January, together with the detailed statement of notification of infectious disease certificates.

In January, 1910, I again received a C.M.B. call as the nearest practitioner to the same village for a case of violent hæmorrhage (miscarriage 5½ months). The midwife sent as death was imminent. This call was received at 2 A.M., and I had to motor cycle over frozen roads partially covered with water and the rain falling heavily. I cleared the uterus and attended the woman for over three weeks. I sent this call also to the Newbury board of guardians and claimed the fees. The clerk replied: 1. That the first claim was barred by statute (should have been sent in quarterly, although no date was named on the circular sent out); and, secondly, that the January claim was not for attendance at the delivery of a viable child. 2. That the guardians would see what they could do if I could prove to them that I had taken reasonable steps to secure the fee from the person attended. The women were in both cases the wives of labourers earning one 12*s*., the other 13*s*. a week. I should not dream of attending such persons in my own neighbourhood on credit unless as district medical officer under a guardians order, and am certainly not going to dun such persons for fees which the guardians of that district had promised to pay to any practitioner so called. For the future some other and younger medical man can attend these calls in the district of the Newbury board of guardians.

The nett result of the matter is that I have had pounds of out-of-pocket expenses and hours of time taken up attending persons that I never voluntarily undertook to attend, owing to the joint action of the Central Midwives Board and the Newbury board of guardians, and have not received one penny piece. To paraphrase the last words of Mrs. Sidney Webb's letter, "Why should doctors be treated differently from other men?"—I am, Sir, yours faithfully,

CHARLES S. PATTERSON, M.B. Edin.,
M.R.C.S. Eng.,
Medical Officer, Lambourn District, Hungerford Board of Guardians.

Lambourn, Berkshire, April 22nd, 1910.

THE JOHN HERBERT WELLS FUND.

To the Editor of THE LANCET.

SIR,—Referring to the appeal on behalf of the widow and children of the late Dr. J. H. Wells, who died in the course of research work, we write to say that the sum actually received in response to the appeal amounted to £4760, which has been invested by the direction of the committee in the names of the Right Honourable the Earl of Dalhousie, Sir Almroth E. Wright, M.D., F.R.S., Leonard Colebrook, M.B., B.S., Julian G. Lousada, and John Matthews, M.B., B.C., who hold it under a deed of trust on behalf of the beneficiaries.

We are, Sir, yours faithfully,

DALHOUSIE
JULIAN G. LOUSADA } Honorary Secretaries, the Wells Appeal Fund.

Old Broad-street, E.C., April 25th, 1910.

CÆSAREAN SECTION IN PLACENTA PRÆVIA.

To the Editor of THE LANCET.

SIR,—The following statistics, which did not arrive in time to utilise in the discussion at the meeting of the Obstetrical and Gynæcological Section of the Royal Society of Medicine on April 14th, may be of interest.

Dr. Thrès, from Professor Bumm's clinic in Berlin, records from the year 1904 to 1909, 179 cases of placenta prævia. The total maternal mortality 5 (2·85 per cent.), 94 of the fœtus (52 per cent.). 15 vaginal Cæsarean sections were performed, with 1 maternal death (6·6 per cent.). Mortality of the fœtus 7 (46·6 per cent.). Professor Dimitri de Ott, from the Imperial Institute of Obstetrics and Gynæcology, St. Petersburg: During 18 years there were 111 cases of placenta prævia, with a total maternal mortality of 2·51 per cent., and of the fœtus 71 per cent. No Cæsarean section has been performed. From Sir Halliday Croom I learn that no Cæsarean section for placenta prævia has been performed to his knowledge in Edinburgh, and Dr. Munro Kerr (Glasgow Maternity) says that the only case in which he performed Cæsarean section for placenta prævia was the successful one already reported.[1] He is "convinced that the operation has a place in certain well-chosen cases, but these are very few and far between.

I am, Sir, yours faithfully,

April 23rd, 1910. H. MACNAUGHTON-JONES.

FOXWELL MEMORIAL.

To the Editor of THE LANCET.

SIR,—We ask permission to call attention in your columns to a fund which has been opened with the object of perpetuating the memory of our late friend and colleague Dr. Arthur Foxwell, whose untimely death by accident last year was, and still is, deeply deplored. It has been decided that the memorial shall take the twofold form of a mural tablet to be affixed within the Queen's Hospital, and of an annual prize for a clinical essay open to residents of several Birmingham hospitals.

Personal friends, colleagues, and past house physicians of Dr. Foxwell have subscribed for these purposes about £200, of which sum £150 is available for endowment of the prize. If there are other friends and former associates of Dr. Foxwell who would wish to contribute to this memorial we beg to intimate to them that the fund is not closed, and that we shall be grateful for any further subscriptions.

We are, Sir, yours faithfully,

J. T. J. MORRISON,
Chairman of the Medical Committee, Queen's Hospital.
O. J. KAUFFMANN,
22, Broad-street, Birmingham.
A. W. NUTHALL,
89, Cornwall-street, Birmingham.
W. F. HASLAM,
54, Newhall-street, Birmingham.
} Treasurers of the Fund.

Birmingham, April 25th, 1910.

THE FAR EASTERN ASSOCIATION OF TROPICAL MEDICINE.

(FROM A SPECIAL CORRESPONDENT.)

FIRST BIENNIAL MEETING.

THE first biennial meeting of the Far Eastern Association of Tropical Medicine was opened on Saturday, March 5th, in the Administration Building of the Philippine General Hospital, Manila, by an address of welcome from the Hon. GREGORIO ARANETA, Minister of Justice, in the unfortunate absence, through indisposition, of His Excellency Vice-Governor N. W. Gilbert. An address on behalf of the city of Manila was then given by the Hon. FELIX M. ROXAS, President of the Municipal Board, after which the President of the Association, Dr. PAUL C. FREER, delivered his opening address on "The Tropical Sunlight." In the evening a reception and dance to the foreign delegates were given at the University Club.

On the following day a visit to the Naval Hospital at Cañacao, Cavite, by invitation of the Medical Corps, United States Navy, was made. Some 30 members were present and the hospital was thoroughly inspected, every courtesy being extended to the visiting members by Surgeon E. R. Stitt and the assistant surgeons. The hospital is an excellent, up-to-date building, with every modern convenience, and is built of reinforced concrete, all the windows being protected from mosquitoes by wire netting. There is quite a large out-patient department carried on by this hospital amongst the native Filipino and others in the surrounding district.

On Monday, March 7th, the scientific work commenced at 9 A.M. in the Administration Building of the New General Hospital, which is almost finished but not yet occupied, and was built to replace the present Civil Hospital, which is an old Spanish building in the central part of the town. It is situated to the north of the Bureau of Science and within 200 yards of it. In accordance with the prevailing practice it is built entirely of reinforced concrete. There were excellent exhibits of foodstuffs and medicinal plants, as well as pathological and zoological specimens. The snakes of the Philippines were to be seen on the ground floor.

[1] Transactions of the Royal Society of Medicine, vol. iii., p. 1.

Major W. P. CHAMBERLAIN of the United States Army read an interesting paper on Statistical Studies of Uncinariasis among White Men in the Philippines. He showed how much more prevalent the uncinaria Americana (necator Americanus) was than the ankylostoma duodenale, and how, in all probability, it was introduced to the Philippines by the American troops.—In the discussion which ensued Dr. J. M. ATKINSON (Hong-Kong) asked in what part of the United States this hookworm was prevalent, and whether a medical examination, more especially with regard to the possible presence of this parasite, was not now made before the recruits left the United States, as it was a serious matter introducing a parasite from the West to the East, especially when it found a suitable habitat in the intestines of the Filipino natives. He also inquired whether there was no evidence of the presence of the parasite during the Spanish occupation of the islands.—Major CHAMBERLAIN, in his reply, stated that this examination is now carried on, but there were only scanty records of any parasitic prevalence in the writings of the Spanish doctors.

The next paper, on Unidentified Larvæ of some Dipterous Insect Developing in the Deep Urethra and Bladder, was read (for Assistant-Surgeon G. P. TRIBLE) by Surgeon E. R. STITT, United States Navy.

Mr. C. S. BANKS, of the Biological Department of the Manila Bureau of Science, then read an interesting paper on the Rôle of Arthropoda in Man's Life in the Tropics. A discussion followed.

The next paper, Flies and Fleas as Factors in the Dissemination of Disease, by Dr. J. S. PURDY (Auckland, New Zealand) was read by Dr. CLARK, the secretary of the association.

The last paper was on the Treatment of Trypanosomiasis by Dr. R. P. STRONG and Dr. O. TEAGUE, Biological Laboratory, Bureau of Science. (See Fig. 1.) It demonstrated how the administration of arseno-phenylglycin, which had been kindly supplied from Berlin (Professor Ehrlich's laboratory), had caused the disappearance of the trypanosomes in the blood of monkeys suffering from surra. Elaborate tables were shown proving that in those animals which had been inoculated with surra a dose proportionate to the body weight of the animals had practically cured them of this disease. The results of similar experiments with horses were given; although in a few cases improvement had occurred the results in horses were not so conclusive as were those in monkeys.

In the afternoon a visit to the Germinal Tobacco Company was made, the director, Dr. Batista de Leon, one of the members of the Association, courteously acting as guide. One thousand nine hundred hands, chiefly Filipinos, are employed, and the death-rate amongst the employés is only about 2 per 1000. Seven and a half million cigarettes and 275,000 cigars are daily turned out by this factory, figures which are certainly staggering. Some 50 of the members with most of the foreign delegates were present, many being accompanied by their wives. From 5 to 7 P.M. a reception was given by Mrs. Higgins at Caloocan, at which many of the delegates attended. The grounds were beautifully illuminated, and the orchids and palms were much admired.

The third session was opened on Tuesday, March 8th, by "An Historical Survey of Plague in Hong-Kong since its Outbreak in 1894, with an Account of the Measures which had been taken in Dealing with It," by Dr. J. M. ATKINSON, principal civil medical officer, Hong-Kong.—This was followed by a paper from Dr. F. W. CLARK, medical officer of health, Hong-Kong, detailing the present procedure *re* plague measures in Hong-Kong.—A discussion followed, in which Dr. H. C. HIGHET (Siam), Dr. A. CASTELLANI (Ceylon), Mr. G. E. BROOKE (Singapore), and Dr. R. P. STRONG took part.

A paper on the Present Position of the Leper in view of the Resolutions passed at the International Conference on Leprosy at Bergen, 1909, was read on behalf of Sir ALLAN PERRY, principal medical officer of Ceylon, by Dr. FRANCIS CLARK.—At the conclusion of the paper Dr. ATKINSON suggested the formation of committees to consider during the present session what practical measures could be advanced *re* leprosy, plague and quarantine, and beri-beri. He pointed out that if this were done much practical good would result. Never before in the East had there been such a gathering of delegates, practically from every country east of Suez, there being delegates from Ceylon, India, Federated Malay States, the Straits Settlements, Netherlands Indies, Siam, Hong-Kong, Tsingtau (German), Hankow (China), and Japan, and it was a pity to lose such an opportunity.—Dr. P. HIGHET seconded, and it was agreed to appoint such committees, the nomination being left to the President.

Later committees were appointed to consider and report on, in addition, tuberculosis and the opium question.

Mr. M. T. CLEGG, of the Biological Laboratory, Bureau of Science, read a paper on Leprosy, and a demonstration was given by Major E. R. WHITMORE, United States Army, of the cultivation of the leprosy bacillus in artificial media. This, which has baffled bacteriologists for years, has been accomplished by Mr. Clegg. He has grown it in symbiosis with amœbæ, and the technique, which he explained, will be fully described in the Transactions. He first grows the amœbæ in gelatin cultures, then introduces the lepra bacillus, kills off the amœbæ, and obtains a growth of the lepra bacillus on gelatin. Dr. SHIBAYAMA (Japan) also demonstrated leprosy in living rats and guinea-pigs.

Dr. A. W. SELLARDS, of the Bureau of Science, read a paper on the Treatment of Asiatic Cholera.

Dr. A. F. COCA'S (Bureau of Science) Treatment of Cancer by a vaccine prepared from the cancer growth itself was described by Dr. P. K. GILMAN. The tumour tissue immediately after excision is comminuted as far as possible with scissors, and passed ten times through a vaccine grinder which has been sterilised by successive rinsing with pure carbolic acid, absolute alcohol, and sterile salt solution. After the first passage through the grinder an equal volume of sterile salt solution is added. By this thorough grinding of the tissue practically the tumour cells are completely broken up, so that the decanted fluid contains all the protoplasmic and nuclear substances of these cells. In order to get rid of the threads of fibrous tissue the thick creamy fluid is centrifuged at a high speed for three minutes and decanted. A cubic centimetre of 5 per cent. carbolic acid is then added to every 10 cubic centimetres of fluid. Injection is made preferably within six hours after addition of carbolic acid, otherwise the fluid must be kept in cold storage. Notes of several cases in which it has been used with success were read. This investigation is still further being carried on by Dr. Coca.

At 1.30 P.M. a luncheon was given by the medical officers at the Division Hospital, United States Army. Afterwards a visit was paid to the wards, where several interesting cases of tropical disease were shown, particularly some cases of sprue and malarial fever. A series of six cases of skin reaction in suspected tuberculosis were shown.

On Wednesday, March 9th, various papers were read, including one by Major A. HOOTON, I.M.S., on Litholapaxy, detailing his experiences of this operation in India.

In the afternoon, between 3 P.M. and 5 P.M., visits were made to the Medical College (Fig. 2), the San Lazaro Hospital, and the health stations in charge of the Bureau of Health, when Dr. V. G. HEISER explained the methods in use of scavenging and removal of night soil. At 9 P.M. there was a reception at the English Club, San Marcelino, followed by a dance.

On Thursday, March 10th, the general subject for discussion was Fever in the Tropics, although the meeting opened with an interesting address delivered by Mr. G. E. BROOKE, health officer of Singapore, on Trachoma. An animated discussion ensued. Other papers dealing with malaria followed, together with one on typhoid fever.

In the afternoon a visit to Fort McKinley, by invitation of the Medical Corps, United States Army, was made. The Post hospital was visited, and a company of the Army Medical Corps with field hospital equipment was inspected; and at 9 P.M. a reception was given to the delegates by Dr. and Mrs. Freer.

On Friday, March 11th, the session was devoted to dysentery and beri-beri. This was a most interesting morning.

Dr. H. FRASER (Federated States), Dr. J. DE HAAN (Netherlands Indies), Dr. H. C. HIGHET (Siam), and Dr. Y. K. OHNO (Manila), all working on the same subject, unbeknown to each other, practically came to the same conclusion—viz., that a most important, if not *the* most important, factor in the etiology of beri-beri was the consumption of white (polished) rice as the staple article of diet. Dr. Fraser's experiments at the Federated States were ably and succinctly given and will be fully detailed in the printed Transactions. Briefly stated, it is the deficiency of the fat and proteid layer of the rice grain which is removed during the process of polishing that causes

FIG. 1.

Bureau of Science, Manila.

FIG. 2.

Medical College, Manila.

or appears to cause beri-beri. In this layer there is a certain percentage of P_2O_5, the deficiency of which may be the important factor.[1] At any rate, it is the eating of rice impoverished by polishing which seems to produce beri-beri.

At 8 P.M. there was a subscription dinner at the Army and Navy Club to the delegates under the chairmanship of His Excellency NEWTON W. GILBERT, Vice-Governor of the Philippine Islands.

On Saturday, March 12th, the following papers were read: Dr. G. SHIBAYAMA: Beri-beri as Occurring in Japan. Dr. CASTELLANI: Various Subjects in Tropical Medicine. Major HOOTON: Mycetoma. Surgeon E. R. STITT: On a Method of Making Blood Counts in Wet Preparations. Three papers on tuberculosis followed.

In the evening the foreign delegates, accompanied by some 20 members of the association, left for Baguio, the hill station and health resort of Manila, at 10 P.M. Here Sunday was spent in visiting hospitals, civil and military, and generally exploring Baguio, which is situated some 5400 feet above the sea level and is an excellent hill station very similar in a way to Simla. There is a plateau some 30 miles in extent, which is becoming gradually covered with bungalows. There is an excellent country club with a golf course, a polo ground, baseball ground, and practically all the accessories of a delightful hill station. The temperature, which was 86° F. in Manila, was only 62° at Baguio.

The eighth session on Monday, March 14th, was devoted to climate, hygiene and sanitation. Six papers were down for discussion but only two were read—namely, one by Dr. V. G. HEISER, of the Bureau of Health, on Problems which Confront the Bureau of Health, and another by Captain J. M. PHALEN, of the United States Army, on an Experiment with Orange-red Underwear in the Tropics. An interesting discussion followed on both these papers. The remaining papers were taken as read.

This the first meeting of the Far Eastern Association of Tropical Medicine was successfully brought to a conclusion by the business meeting, which followed an interesting paper by His Excellency Mr. DEAN WORCESTER, Minister of the Interior, on Baguio as a Health Resort. At this business meeting an invitation from the Governor of Hong-Kong was submitted that the second meeting be held at Hong-Kong in 1912; this was accepted with acclamation, and Dr. J. M. Atkinson was appointed president, with Dr. F. W. Clark honorary secretary and treasurer.

The meeting was closed with a vote of thanks to all the societies, institutions, and residents for their extreme kindness and generous hospitality extended during the session to the foreign delegates and to the association generally.

The following foreign delegates were present: Dr. J. M. Atkinson and Dr. F. W. Clark, Hong-Kong; Captain H. M. Neeb and Dr. J. de Haan, Netherlands Indies; Dr. Gorusaku Shibayama, Japan; Mr. G. E. Brooke, Singapore; Dr. H. Fraser, Federated Malay States; Dr. H. C. Highet, Siam; Dr. Aldo Castellani, Ceylon; Dr. Staby, Tsingtau; Dr. Beebee, Hankow, China. Major A. Hooton, I.M.S., and Dr. M. H. Fulton, Canton, were also present.

The Association passed the following resolutions dealing with various diseases, quarantine, and opium:—

Beri-beri.

That in the opinion of this Association sufficient evidence has now been produced in support of the view that beri-beri is associated with the continuous consumption of white (polished) rice, as the staple article of diet, and the Association accordingly desires to bring this matter to the notice of the various Governments concerned.

Leprosy.

That: 1. Leprosy is to be regarded as a dangerous communicable disease. 2. Compulsory notification of all cases of leprosy to the authorities is essential. 3. Compulsory segregation of all cases of leprosy is necessary and preferably in special colonies constructed for the purpose. 4. The entrance of aliens afflicted with leprosy into a country must be prohibited.

Plague.

In our opinion the only practical measure concerning plague that we can recommend is the advisability of each country represented agreeing to notify to other countries the occurrence of cases of plague within their borders, the first case by telegram and afterwards by weekly returns.

Tuberculosis.

That the Far Eastern Association of Tropical Medicine should use its influence to cause the formation of a national anti-tuberculous society in each political entity represented in the Far Eastern Association of Tropical Medicine. These societies to be formed along the lines of existing anti-tuberculous societies in other parts of the world, yet revised to facilitate the work under local conditions.

Quarantine.

That the Far Eastern Association of Tropical Medicine, appreciating the benefit which would accrue from concerted sanitary action on the part of Eastern Governments, be empowered officially to approach the following Governments—namely, Philippine Islands, Japan, Hong-Kong, French Indo-China, Siam, Netherlands-India, Straits Settlements and Ceylon, with the view, if possible, of obtaining their official support on the following lines:—1. To have a common standard for the term "epidemic" when making reports to, or imposing quarantine against, each other. We suggest the following definition for consideration:—"Plague, cholera, small-pox, or yellow fever shall be considered to be epidemic when, after the first telegraphic report of its occurrence, any weekly report thereafter shall show the occurrence of an average daily number of three cases." 2. To agree to notify each other's territories as infected only when the infectious disease shall have assumed epidemic proportions as defined above; and automatically to withdraw such notification when the average number of cases for three successive weeks has fallen below the *status epidemicus* as above defined. 3. To circulate weekly returns of plague, cholera, small-pox or yellow fever amongst each other, and also a telegraphic report on the first occurrence of any of these diseases, in a clean port or territory. 4. To insist on a bill of health being carried by all ships, leaving a country declared to be infected, which intend to proceed to the port of another signatory; such bills of health to include a return of infectious disease for the previous 48 hours. 5. To report by telegram to the country concerned, the departure of an infected or suspected ship (as defined by the Paris Convention) which may intend to proceed to any port in the territories of another signatory; and to endorse the bill of health of the said infected or suspected ship with a full account of measures taken to disinfect or otherwise deal with the said vessel.

Opium.

The committee appointed to consider the opium question regret that the time at their disposal precludes the possibility of giving the subject adequate consideration. They have reviewed the work done and the resolutions agreed on by the International Opium Commission, Shanghai, 1909. With these resolutions the Committee are in agreement, but it is to be regretted that the paucity of medical commissioners prevented the question being dealt with fully in its medical aspects. Any measures which are introduced for the control of opium must be adequate to guard against the danger of secret remedies containing opium and opium derivatives being substituted. They would suggest that the delegates from the various countries represented at this Conference should be asked to arrange that the regulations controlling the sale and use of opium in their respective countries, as well as any observations they may care to make on this subject, be submitted to the next meeting of this Association in 1912.

[1] THE LANCET, March 12th, 1910, p. 733.

BRISTOL AND THE WESTERN COUNTIES.

(FROM OUR OWN CORRESPONDENT.)

University of Bristol.

DRAFT ordinances have recently been approved by the University Council which contain important provisions for supplementing university teaching in professional or technical directions by associating with it institutions in which teaching of a specialised character is given or in which facilities for research in special directions are afforded. For university purposes such institutions will be treated as part of the University itself. Provision is also made in the ordinances for affiliation of other educational institutions, attendance in which may be accepted in lieu of attendance in classes within the University itself. Professor A. P. Chattock has resigned the professorship of physics, held by him for some years; the Council accepted his resignation with expressions of deep regret.

Dinner to Mr. L. M. Griffiths.

The Clifton Shakspere Society on Saturday, April 23rd, gave a dinner in honour of Mr. L. M. Griffiths, who has resigned his offices of honorary secretary and honorary librarian to the society after 34 years' service. The society's excellent library is now housed within the University premises.

The Medical Dramatic Entertainment.

The Medical Dramatic Society of the University of Bristol gave its annual entertainment at All Saints' Hall, Clifton, the play performed being *An American Citizen*, by Madeleine Lucette Ryley. The leading parts were admirably played by Mrs. P. A. Opie and Miss Duncan-Lees, while Mr. R. I. Dacre scored a great success as Simms, the imperturbable valet. The hall was filled on each of the five nights, and it is confidently anticipated that a substantial sum will be realised. The proceeds are to be devoted to the help of the University Clubs Union.

April 26th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Changes in the Surgical Staff of the Royal Infirmary.

Mr. F. A. Southam, in view of the approaching expiration of his term of office as honorary surgeon at the infirmary, has resigned the professorship of clinical surgery at the University of Manchester. Mr. Southam followed Mr. Walter Whitehead in 1900, and has held the position with great advantage and benefit to the Medical School and students. He is to be succeeded by Mr. William Thorburn, M.D., B.S. Lond., F.R.C.S. Eng., who has long been connected with the Owens College, the University, and the Manchester Royal Infirmary, first as a student and then as a very able member of the teaching staff. Mr. Thorburn was a distinguished student, and his subsequent career has fully borne out the promise of his early days. He became assistant surgeon to the infirmary in 1889 and surgeon in 1899. Graduating in medicine at the University of London, he obtained the scholarship and gold medal in medicine, the gold medal in obstetric medicine, and also the gold medal in surgery. In 1891 he obtained the Jacksonian prize of the Royal College of Surgeons of England, and in 1894 was appointed Hunterian professor of surgery and pathology. He is also an examiner in the University of London.

Open-air Schools.

It is satisfactory to know that the experiment of open-air schools for delicate children seems to be generally a success. One of the latest to come under notice is that of Halifax, where during last summer 130 children were admitted to the open-air school at Bemerside suffering from one or other of the following formidable list of ailments: anæmia, enlarged glands, bronchitis, phthisis, chorea, and rickets. The head mistress reports that the children were generally improved, and some so much so as scarcely to be recognised for the delicate and puny little people who arrived on the first morning. They were happier, better tempered, more cheerful, and their intelligence was much improved. It would be well if these experiments were carried out more extensively, of course with judgment, for the results so far are certainly promising.

Royal Albert Institution.

The annual joint meeting of the Manchester committees of the Royal Albert Institution, Lancaster, was held in Manchester on April 19th. The secretary reported that the Manchester Ladies' Association had so far collected over £317 for the current financial year. The alteration of the title of the institution will be noticed. It was felt that the name Royal Albert Asylum was more likely to be confused with the rate-supported lunatic asylums than when it was called an institution. The Manchester and Salford district is a wide one, including the towns of Bolton, Burnley, Bury, Leigh, Oldham, and Wigan, and it is considerably indebted to the institution for maintaining the 155 local patients now in the institution. An appeal has therefore been made to cover this indebtedness. There are 686 patients at present in the institution, 283 of them from Lancashire, while there are many urgent applications for free admission by election. There is to be an election next month, with 83 candidates for 40 vacancies, while Lancashire has 28 applicants for 16 places. These figures tell little or nothing of the hope, the anxiety, and distress involved in each single case. The appeal for help is fully justified, for the cause is good and must call forth sympathy from all.

Mr. Thomas Windsor, M.R.C.S. Eng., L.S.A.

To the junior members of the medical profession in Manchester the name Tom Windsor, as his more familiar friends called him, is little known, or only known as belonging to a past era, for he retired from practice many years ago. But during a considerable part of the latter half of the nineteenth century he had a great and deserved reputation as an ophthalmic surgeon. He was born in 1831, qualified in 1853–54, and died at Great Budworth, Cheshire, on April 13th. He was the son of a well-known and highly esteemed general practitioner, Mr. John Windsor, but struck out a line of his own, soon becoming surgeon to the Royal Hospital, Salford, and to the Manchester Eye Hospital, being also, for a time, surgeon to the Manchester Southern Hospital for Women and Children. Later he became ophthalmic surgeon to the Royal Infirmary and lecturer on ophthalmology at the Owens College, before its absorption into the University of Manchester. In addition to the clinical position which these appointments, successfully filled, prove him to have occupied, he was a man of great culture. His knowledge of medical literature, both ancient and modern, was, without exaggeration, phenomenal, and he was known among his friends as a most ardent lover of books. This it was that led him to devote his leisure hours for over 20 years to the building up, arranging, and cataloguing of the Manchester Medical Society's library, one of the finest in the country. For some years he edited the *Ophthalmic Review* and was the author of the New Sydenham Society's Reports on Surgery for 1862–64 and Report on Ophthalmic Medicine and Surgery 1865–66. He was not a great traveller, but made on one occasion what was considered in those days rather an adventurous journey to Russia, seeing, among other things, the famous fair at Nijni Novgorod.

April 26th.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Educational Treatment of Consumptives.

THE health committee, in a report to be presented to the city council on May 3rd, states that experience in the working of Salterley Grange Sanatorium has forced upon it he desirability of making provision for the treatment of more advanced cases of consumption than are eligible for the sanatorium. Experience in selecting patients for the sanatorium has shown that the majority of applicants have passed the first stage of the disease. Many, however, would derive great benefit from a short course of treatment, and their infectivity would be reduced. The committee feels that facilities should be provided for a short period of educational and recuperative treatment for patients of this class. The small-pox hospital at Little Bromwich has been unoccupied for five years, and at small cost it could be made suitable for consumptives. It is proposed to adapt two large pavilions by certain internal alterations and the erection of a covered verandah. Two shelters will also be required in the grounds. The total cost of the alterations is estimated at £1200. It is intended that the average treatment shall last six weeks, thus allowing 400 cases to be received during the year. The main feature in connexion with the treatment will be the practical instruction of the patients in the value of fresh air and in the regulation of their own lives, so that they may learn how best to combat the disease and prevent infection of others. The staff would include a visiting physician skilled in the treatment of consumption, a resident medical officer, matron, nurses, and so on. The cost of maintenance is estimated at about £2500 per annum.

Proposed Taylor Memorial Home.

A project is on foot for the establishment of a home for incurables in connexion with the Birmingham and Midland Hospital for Women. A statement signed by Dr. Ann E. Clark, Mr. Christopher Martin, Mr. J. Furneaux Jordan, Mr. F. Edge, Dr. Mary D. Sturge, and Mr. J. T. Hewetson, the members of the honorary staff, sets forth the need for the proposed home. It points out that at the Women's Hospital patients suffering from internal malignant disease can in many instances be practically restored to health by operation; but, on the other hand, there are cases in which the malady is too advanced for successful treatment, and only a few weeks or months of life remain to such women. Where and how are they to pass this period of suffering? They are too ill to live alone, and if relatives exist, these usually consist of persons with young families dwelling in crowded houses entirely unfit for the reception of cases of hopeless disease. The average workhouse infirmary is not the place to be suggested to many of these deserving and self-respecting poor. An influential committee has been formed to advance the scheme, and it is proposed to begin in a very small way with a simple nursing home near the hospital containing six or eight beds. The cost of maintenance is estimated at £300, the friends of patients being expected to contribute a small sum weekly when able to do so. The

suggestion is made that the home should be called "The Taylor Memorial Home," in recognition and commemoration of the 24 years' valued and self-sacrificing services rendered the hospital by the late Professor Taylor. Among the promises of donations received is one of £500 from Mrs. W. A. Cadbury and another of £105 from Mrs. Christopher James.

April 26th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

A Highland Medical Officer's Heroism.

A LOCHBROOM correspondent of the *Scotsman* writes: "Dr. Gunn, medical officer of the parish of Lochbroom, in response to a call to a keeper's house some twenty-five miles distant, left in the early morning cycling. Before he had gone far a gale sprang up, which gradually increased to a hurricane. Sheets of rain came down in the valleys. On the hill-tops and mountain ridges snow fell, and sweeping downwards melted into coldest sleet. A stormier day has seldom been experienced in the district. The keeper's house was reached after a trying journey. But that was not all. Dr. Gunn left behind him a patient, who, if not visited that night, would be in imminent danger. To cycle back or, indeed, to cycle at all was quite out of the question, but to return somehow was a necessity of which Dr. Gunn had never lost sight. By this time the day had worn into evening. To walk back by the road would mean not reaching home till well into the following morning. To take a short cut over the hills was the only possible course. Securing, therefore, a trustworthy guide, Dr. Gunn walked out into the late evening and on to the mountain side and over it, and through the darkest night and wildest he walked or scrambled somehow over a famous spur of Benmore Coigach called the Coigach Rock. The mountain is based on the rock in question, which rises sheer for many hundred feet out of the sea. There is no path, and so dangerous was the route taken by the doctor and his guide in the night that only men of nerve would dare try it in daylight. With almost superhuman strength the worthy doctor pushed forward and arrived at the house of his suffering patient in a state verging on collapse, but rewarded by the sense of having done his duty and saved a life." We congratulate Dr. Andrew Rugg Gunn on a veritably heroic act.

Tuberculosis in Glasgow.

The Glasgow and District Societies' Committee for the Suppression of Tuberculosis, which has been in existence for two years, has been reconstituted on a wider basis, and will henceforth be known as the Glasgow and District Societies' Council of Public Health. The organisation was originally a joint committee of the Trades' Council and the Friendly Societies' Federation, and after some time its ranks were increased by the inclusion of delegates from coöperative societies. At the last meeting there were represented 28 trade unions, 11 ward committees, 10 coöperative societies, and 5 friendly societies. A resolution was adopted calling upon the corporation to provide dispensaries in all working-class parts of the city where advice, appliances, and other assistance would be given free of charge and without stigma to all persons suffering from tuberculosis who lived within the city boundaries. Another motion was also approved which demanded that the corporation should go further and provide hospitals for the treatment and isolation of tuberculous patients, the only tuberculous cases at present dealt with in hospitals in the city being those passed by the parish council.

Clinical Laboratory for Western Infirmary, Glasgow.

At the Dean of Guild Court the directors of the Western Infirmary have been granted warrant to erect a block of buildings in the infirmary grounds. When completed the new block, which is estimated to cost £5000, will be used as a clinical laboratory.

Post-graduate Course at Royal Infirmary, Glasgow.

The classes in connexion with the post-graduate course at the Royal Infirmary, Glasgow, will commence on May 2nd. Anyone desirous of attending any of the classes may obtain information by applying to Dr. J. M. Thom, superintendent of the infirmary.

Extension of Stirling Infirmary.

The extension of the Stirling Royal Infirmary has been discussed for some time, but the lack of accommodation has now become so evident that the directors feel that building operations can no longer be delayed. It has now been resolved to proceed with one part of the work in the meantime—that of a new west wing, which will provide convenient and commodious accommodation for dispensary out-patients and also for the staff. The cost of the new wing will be about £4300.

April 26th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Post-Graduate Classes in the University of Dublin.

TRINITY College, Dublin, the first medical school in Ireland to start systematic lectures and demonstrations for qualified practitioners, has issued its annual syllabus of post-graduate classes. As for the past two years, there will be a summer and an autumn course. The former will begin on June 6th and the latter on Sept. 19th. The duration of each course will be three weeks. Instruction will be given in medicine, surgery, gynæcology, diseases of the eye, ear, throat, nose, and skin, and also in anatomy, physiology, urology, and radiology. The classes are essentially practical and are specially adapted to the requirements of the general practitioner. One advantage of having two sessions each year is that the classes are more limited in numbers so that each member has an opportunity of personally examining every case which is demonstrated. During the operative surgery course a considerable number of operations is performed on the cadaver by each member of the class. The inaugural lecture will for this year be given by Mr. B. G. A. Moynihan. The social side of the class has not been forgotten. Members, whether graduates of the University of Dublin or not, can obtain, if they so desire, completely furnished rooms in College, and can dine on commons. Particulars of fees and a prospectus may be obtained on application to the honorary secretary, Dr. A. R. Parsons, 27, Lower Fitzwilliam-street, Dublin.

Belfast Ophthalmic Institution.

At the annual meeting of the supporters of this Belfast charity, held on April 19th, the Lord Mayor presiding, it was reported that there were in the past year 145 intern and 1370 extern eye, and 776 extern ear, nose, and throat cases. The extern department, thanks to the help of various friends, has been renovated, there being now three main and three smaller rooms, besides additional dark rooms, and a small extern theatre for the carrying out of minor operations and dressings. These changes cost £425. Financially there is a debit balance of £25. The income was £300, which very nearly met the current expenditure of the institution.

Newry Water-supply.

Mr. J. N. Richardson, D.L., has not only paid the expert who made a report as to the existing defects in the supply of water from Camlough mountain to Newry, but he has also offered to undertake, at his own expense, to carry out these changes. At a meeting of the Newry urban council, held on April 19th, Mr. Richardson's act was referred to in the warmest terms of praise.

County Antrim Infirmary.

It was unanimously resolved at a public meeting of the inhabitants of Lisburn, held on April 18th, to promote a bazaar to raise the cost of an electrical installation for the County Antrim Infirmary in Lisburn. It is estimated that the cost will be about £1000.

Ulster Medical Society.

The eighth meeting of the session was held on Thursday, April 21st, in the Physiological Department of the Queen's University of Belfast, Dr. J. J. Austin, the President, being in the chair. Professor T. H. Milroy read a paper on the Experimental Study of Mental Fatigue. Dr. J. A. Milroy gave a communication on the Oxygen Capacity of the Blood. In the Pathological Laboratory Dr. W. J. Wilson gave a short paper on Carbon Mcnoxide Poisoning. Specimens of

glossina palpalis, presented to the Hygiene Museum, were shown by Surgeon A. McCloy, R.N., while Dr. J. A. Sinton showed some preparations of trypanosomes and spirochætæ. In the Anatomy Department Mr. P. T. Crymble gave a lantern demonstration of (*a*) the suspensory muscle of Treitz; and (*b*) the blood-supply and position of the pelvic colon. He also showed specimens of (*a*) diverticulum of the duodenum; and (*b*) preparations demonstrating the anatomy of lumbar puncture. Dr. J. S. Dickey exhibited drawings, slides, and casts illustrating the anatomy of the apex of the lung. Professor J. Symington, Dr. J. Rankin, and Mr. J. Holmes showed anatomical specimens.

Superstition in Ulster.

At an inquest held at Banbridge, County Down, on April 23rd, on the death of a young woman, aged 22 years, it came out in evidence that her father got a "cure" for her disease—which was erysipelas—consisting of a bit of butter, which he took to a "charmer" in Tandragee, who gave it back to him, and with it he treated her until, finding her getting worse, he called in Dr. W. N. McWilliam of Banbridge. The doctor said the effect of the charm was purely negative; had the girl been put under proper medical treatment there was a strong probability that she would have been saved. The jury returned a verdict in accordance with the medical evidence, but disagreed as to adding any rider to their verdict.

April 26th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Medical Students in France in 1910: Cosmopolitanism.

ON Jan. 15th, 1910, the Faculties and mixed Faculties had in all 8029 medical students. Of these 7227 were men, divided into 6600 Frenchmen and 627 foreigners; 802 were females, divided into 312 Frenchwomen and 490 foreign. The students in the medical schools numbered 1692. Of these 1420 were male, 1413 being French and 7 foreign. Of women students 253 were French and 19 foreign. After Paris, which had 2857 matriculated students, the various Faculties came as follows: Lyons, 746 students; Bordeaux, 740; Montpellier, 504; and then Nancy, Toulouse, Lille, and Algiers. As for the schools, Marseilles is at the head with 285 pupils, and next in order come Rennes and Nantes. Besançon closes the list with 31 pupils. Of foreign students enrolled in French Faculties the most numerous are Russian, of whom there are 515 at Paris, 137 at Montpellier, and 29 at Nancy. At Paris, too, there are 62 Turks, 43 Roumanians, and 20 Greeks. Bulgarians are numerous, there being 34 at Nancy and 13 at Montpellier. Nearly every nationality has at least one representative in almost every Faculty, and even in the schools, both preparatory and otherwise. The students of pharmacy number 1448, of whom 53 are women. In these figures are included foreigners of either sex in the higher schools and the mixed Faculties. The schools have 310 pharmaceutical pupils enrolled, of whom 3 are women and 3 male foreign students.

Medical Practice.

The following are the terms of the Act as to Medical Practice in France which has just been gazetted in amendment of that of 1892. Doctors of Medicine, surgeon dentists, and midwives are bound, directly they set up in practice, and before they have performed any act of their profession, to register (without fee) their qualifications at the prefecture or subprefecture and at the depôt of the civil tribunal of their arrondissement. Their qualifications must also be *visé* at the Mairie of the place where they are domiciled. Those who have not yet received their diploma or certificate must register and cause to be *visé* a provisional document with which the Faculty or their professional school, supposing the latter to be duly authorised, will provide them.

Excursions for Medical Study to the Thermal Stations of France.

These excursions, which were organised some eleven years ago, were started with the idea of giving both French and foreign medical men facilities for making acquaintance with the French thermal and climatic resorts. An excursion taking in all the stations in one particular district is organised every year during the first fortnight in September. Medical men and medical students, both French and foreign, and the wives of medical men travelling with their husbands alone are eligible for these excursions. The excursion is so laid out that every station may be thoroughly studied in the shortest space of time. This year the excursion will be to Dauphigny and Savoy, and it will be under the scientific direction of Professor Landouzy. All requests for information must be sent to Dr. Carron de la Carrière, 2, Rue Lincoln, Paris.

Aleppo Boil (Bouton d'Orient).

At a meeting of the Academy of Sciences held on April 4th M. Roux, the Director of the Pasteur Institute, gave an account of a discovery made by M. Charles Nicolle, Director of the Pasteur Institute at Tunis, and M. Manceau, one of his collaborators. These two workers have been able to reproduce Aleppo button experimentally and so to give facilities for ascertaining the etiology of the condition.

Typhoid Fever and the City of Paris.

At a meeting of the Society of Medicine of Paris, held on April 8th, Dr. Paul Vincey read a notable paper on the above subject. The frequency of typhoid fever in Paris has greatly diminished during the last half century and the death-rate is now 10 per 100,000 inhabitants. Every *arrondissement* shows a reduction, but those in the centre are more affected than those in the northern district. The 20th *arrondissement*, which is one of the poorest, shows a very low typhoid fever incidence, one cause of this being the rarity of wells in the quarter. In the suburban communes the north-west side of the Seine used to show a higher incidence of the disease than anywhere else. This is mainly due to the fact that the eight communes included in this district drew bad water from the Seine up to the end of 1905. Since the beginning of 1906, however, the water of the Seine has been filtered at the new works of Mont Valerien and the cases of typhoid fever have fallen by one-half. The reduction is less in the low-lying communes owing to the habit of drinking water from wells which are always contaminated.

A Refusal by the Conseil d'État.

Eighteen months ago the Faculty of Medicine received a legacy of 20,000 francs for the purpose of paying the expenses of the publication of certain treatises on homo sexuality. The treatises were to show that this perversion is a real disease which cruelly afflicts the unfortunate persons who suffer from it. The Faculty accepted the legacy and its conditions, but the Conseil d'État has just decided that the legacy cannot be accepted.

April 26th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Myopia and Heredity.

BEFORE the Society for Social Medicine Dr. Czellitzer read a paper on the Hereditary Transmission of Diseases of the Eyes, based on an investigation of the following morbid conditions: (1) myopia; (2) hypermetropia; (3) strabismus; (4) nystagmus; and (5) coloboma. His material included 488 families of the working class and 62 families belonging to the middle classes. The paper only dealt with the conditions in myopia which were prevalent in 230 families of the working class and in 48 families of the middle classes, the number of cases of the other diseases discovered having been too small to allow a distinct opinion. He found that taking the myopic children, in 30·4 per cent. both parents, in 13 per cent. the father, and in 17 per cent. the mother had been myopic, these numbers exceeding fivefold the average number of myopics in the urban population and tenfold that of the rural population. Concerning indirect heredity, it was found that the number of myopics amongst the grandparents exceeded threefold the average for the general population. Crossed heredity—namely, the transmission of myopia from mother to son and from father to daughter—is somewhat more frequent than one-sex heredity. The first-born children are more liable to become myopic than the younger. The age of the father had no influence. Myopia was found to occur with greater frequency amongst girls than boys. Consanguinity of parents without myopia

does not give rise to myopic offspring but may produce other affections of the eyes. Professor Czellitzer suggested a general collective investigation of the matter on a large scale on behalf of the public health authorities.

On Artificial Goitre.

Professor Wilms of Basle, writing to the *Deutsche Medicinische Wochenschrift* upon goitre in animals, said that it was generally admitted that the use of the water of certain wells and springs was the origin of the evil. The prevalence of goitre in certain districts was stopped at once when the water was supplied from other places. The cause of the disease could, however, not be found by microscopical or bacteriological research. From the prevalence of the disease in quite distinct districts a Swiss *savant*, Dr. Bircher, has concluded that the excitant of the disease depends on certain geological conditions of the soil, and is a product of decomposition of organic substances. Professor Wilms is of opinion that these products, being either toxins or ferments, are present in the water. He administered to rats the water of a certain "strumogenic spring" which was brought to Basle, the result being that they showed a marked hyperplasy of the thyroid gland after a few months. When the water had passed through a Berkefeld filter the result was the same. The materies morbi is not a miasma but an organic soluble substance passing through the filter, and Professor Wilms concludes that the usual filters cannot make the water innocuous as far as goitre is concerned. Heating the water had a salutary effect. Four animals received water subjected to temperatures of 50°, 60°, 70°, and 80° C. respectively. The first animal developed a large goitre, the second and third smaller tumours, and the fourth preserved a normal gland; the toxic substance is thus destroyed only at temperatures exceeding 70°. The cause of the swelling of the thyroid gland is, according to the author, that the latter has an increased activity in destroying these substances. On microscopical examination the artificial tumours resembled very closely human goitres in structure. It was, moreover, remarkable that when the water was evaporated in a vacuum its strumogenic action decreased. The author supposes that the lime salts of water agglutinate the toxic substance and thus make the water atoxic. This theory is in accordance with the fact that the Jura Mountains, which are a chalk formation, are free from endemic goitre.

Sterilisation of Linen by Ironing.

It has lately been suggested by Professor Holscher that linen may be sterilised by simple ironing. The Institution for Infectious Diseases has examined whether this statement can be accepted. It was found that the temperature of flat irons was between 150° and 250° C. Pieces of linen impregnated with infected water, cultures of tubercle bacilli, enteric fever bacilli, diphtheria bacilli, cholera vibrios, and different pyogenic cocci were then ironed and their eventual sterility tested. It was stated that spores, e.g., of anthrax in linen, were not even destroyed by ironing at a temperature of 250°. The vegetative forms of micro-organisms were destroyed after ironing at 250°, but at a temperature of 150°, which practically is seldom exceeded, the success was uncertain. Tubercle bacilli, which were destroyed at 250°, proved at 150° to be living but reduced in virulence. The bactericidal action of dry ironing was less effective than that of damp ironing. The results were, of course, better when the linen was ironed on both sides. The report concludes that plain ironing, in which the temperature seldom exceeds 150°, is insufficient to ensure disinfection of linen, 250° being the minimum, and that, therefore, the old recognised methods were preferable in cases where an efficient disinfection is required.

Congress on Criminal Anthropology.

An international congress on criminal anthropology will be held at Cologne in 1911. A provisional committee consists of Professor Aschaffenburg of Cologne, Professor Sommer of Giessen, and Professor Kurella of Bonn, a larger international committee being in formation. The following subjects are to be discussed before the congress: (1) The present state of criminal anthropology; (2) morphological abnormalities, especially of the skull with reference to expert evidence in courts of law; (3) morphology and psychology of the primitive races of the human species; (4) the influence of heredity and of environment on the criminal; (5) the care of criminals with a deficient sense of responsibility; (6) on prisons; (7) the care of the dangerous insane; and (8) the care of young criminals.

Nutrient Suppositories.

Professor Boas has published in the *Berliner Klinische Wochenschrift* an account of his method of rectal feeding by nutrient suppositories. He said that rectal feeding by enema is attended with great drawbacks, the principal one being that only a small quantity of nutrient material is absorbed. The procedure is, moreover, not only troublesome but has also sometimes been followed by decomposition of the food in the intestines causing colic and tenesmus. In a certain number of cases the total stoppage of feeding by the mouth has been found by several observers to produce parotitis. Professor Boas himself once saw purulent colitis develop after a nutrient enema. In the hope of avoiding these mishaps he some years ago recommended the administration of nutrient enemata in drops, a method which prevents the occurrence of painful spasm and allows larger quantities to be retained in the intestine than would otherwise be possible. Recently he has made trials of nutrient suppositories as substitutes for nutrient enemata. The suppositories consist of albumin, especially of the "crystallised" white of hen's eggs, which in combination with common salt is satisfactorily absorbed; the other ingredients comprise dextrin (the least irritating of the carbohydrates) and emulsified fat, for which cacao butter is chosen. Each suppository has a thermodynamic value of 46·2 calories, and as five of them may be given in a day food having a heat-producing power of about 230 calories may be administered in that time. In addition to the suppositories an enema of about 500 cubic centimetres of a physiological salt solution is given twice a day in order to replace the fluid lost by the various processes of excretion. The suppositories are usually absorbed within three or four hours, and expulsion of them unaltered is comparatively rare.

Action against a Medical Journal.

A remarkable decision was recently given by a Berlin law-court in an action brought against the editor of a medical journal which had criticised unfavourably certain compounds prepared at a chemical factory in Hamburg. The manufacturers accordingly wrote to the editor replying to this criticism and demanding insertion of their reply in the journal in accordance with Article 11 of the Press Act. This being refused by the editor on the ground that the reply contained erroneous statements, an action was brought against him, with the result that he was found guilty and was sentenced to a nominal fine of 1 mark. The court said that, according to the law, when a person felt himself prejudiced by an article published in a journal the editor was compelled to insert any communication which such person might send in reply, and that this must be done even when the editor is persuaded that the reply contains untruths!

April 23rd.

CANADA.

(FROM OUR OWN CORRESPONDENT.)

Rabies in Western Ontario.

RABIES has certainly become unduly prevalent in Western Ontario. The Canadian Minister of Agriculture and the Veterinary Director-General, acting in coöperation with the health department, have decided to take energetic steps to eradicate the disease. On Feb. 5th an order was issued by the Dominion Department of Agriculture on the report of the Veterinary Director-General directing that all dogs in the western peninsula of Ontario shall be securely chained, or kept under lock and key, or kept constantly muzzled. The provincial Government of Ontario, acting by the advice of the Provincial Board of Health, has issued a similar Order in Council. There have been no deaths among the 42 persons bitten, almost all of whom went to New York to be treated at the Pasteur Institute there. At a recent meeting of the Toronto Academy of Medicine a resolution was proposed to the effect that in view of the prevalence of rabies in Ontario representations should be made to the Secretary of the Provincial Board of Health urging the establishment of a Pasteur Institute in the Province.

Pasteurisation and Care of Milk.

In almost all the large cities of the United States the question of a fairly pure milk-supply has received close attention. In the majority of these the example of New York with regard to pasteurisation has been followed. The general opinion seems to be that while pasteurising milk is not an ideal method it is the best method at hand. In Canada pasteurisation of milk is making considerable headway, and Mr. Charles J. C. Hastings, chairman of the Milk Commission of the Canadian Medical Association, lecturing on the subject, has stated that in his opinion before next summer from 50 to 75 per cent. of the milk sold in Toronto would be quite safe to use. This result, he thought, would be to a large extent brought about by pasteurisation. A pasteurising plant has been installed in the Toronto Children's Hospital and is stated to have had an excellent effect on the health of the inmates.

The Cold Storage of Meat.

In both Canada and the United States the price of food of every description has greatly risen within the past few years and is still rising. This is said to be largely due to the abuse of the cold storage system, the charge being brought against many of the large meat packing firms of the United States that food is held in cold storage frequently for the sole purpose of keeping up the price by controlling the market. The Bill, which has been introduced into the legislature of Massachusetts to regulate the cold storage warehouses in that State, provides that on being placed in, or taken out of, cold storage all food products shall be stamped or otherwise marked with the date upon which such action is taken and that not longer than three months shall intervene at any time between these dates. There is, however, another aspect of the cold storage question which has not been sufficiently considered—namely, the fact that meat which has been retained in cold storage for a considerable period may undergo deterioration and become unwholesome. In Canada it is felt that food products should not be retained in cold storage for several months, as is stated to happen frequently here as well as in the United States. An investigation of the changes which take place in meat kept in cold storage for varying periods would be instructive, and a movement is on foot to this end.

April 18th.

UNITED STATES OF AMERICA.

(FROM OUR OWN CORRESPONDENTS.)

Suits for Malpractice in Leaving a Sponge or Pad in the Wound.

THE number of suits for malpractice due to leaving behind a sponge or pad which has been used during an operation seem to be on the increase. The various kinds of defence in these cases form an interesting chapter in medical jurisprudence. In a recent case in Switzerland two eminent surgeons testified that the resemblance of a sponge filled with blood to the tissues of the part was so exact that the most skilful and careful surgeon might overlook the sponge and close the wound with it retained. On the strength of this testimony the verdict was in favour of the surgeon. In a case in a Western State the defence was that the operation ceased when the surgeon ceased to use the knife, and therefore the complaint that he was guilty of gross negligence during the operation was not sustained, as it was admitted on the part of the prosecution that the operation was skilfully performed. The court held, however, that the operation began with the first incision and closed with the finished dressing. In another case in a Southern State the defence was that the enormous amount of detail in modern operations made it quite possible that the most careful surgeon might overlook a sponge or pad. The court sustained that view and the verdict was in favour of the surgeon. In still another case the defence was that the sponges were placed in the care of the nurse, and if any one was left in the wound she was guilty of negligence and not the surgeon. The court held that the nurse was an agent acting under and by direction of the surgeon, and therefore he was responsible for acts performed by her during the operation.

Education in Tuberculosis.

From the fifth annual report of the Phipps Institute, presented by Dr. Lawrence F. Flick, the following principles appear to stand out: That of foreign-born residents who develop tuberculosis in this country, a large number have contracted it from insanitary houses here; that work entailing exposure to dust is the greatest occupational factor; that the mortality is greater proportionately among those who use alcohol and tobacco than among those who do not; that frequent change of residence is a factor, as indicating greater liability to exposure to contagion; that personal contagion is contracted most frequently from those of the same generation (29·37 per cent.), next from the preceding generation (25·81 per cent.), then from fellow employees (11·06 per cent.), the consort's family (8·87 per cent.), contaminated houses (4·64 per cent.), and, finally, from the succeeding generation (3·35 per cent.). Dr. Flick's ultimate conclusion is that "a more intimate knowledge of the subject which has come to us from experience shows us that education by itself cannot accomplish much in the prevention of tuberculosis. For effective prevention isolation of the advanced cases is necessary." In this, perhaps, he overreaches his data. It all depends on what is meant by "education." The effective result of education is the creation of an efficient public spirit, and that is just what is needed to secure the enforcement of the practice of isolation in a popularly governed country. Coercive legislation that is opposed to the general sentiment of the governed will be evaded as much as possible, and either be soon repealed or become a dead-letter. History demonstrates that point over and over again. And such opposition to beneficent measures is in the main the result of popular ignorance. Enlighten the public at large and in due course popular sentiment will support such restrictive and coercive measures against the individual as may show themselves necessary for the public good.

April 19th.

NOTES FROM INDIA.

(FROM OUR OWN CORRESPONDENTS.)

Plague.

THE plague returns for the week ending March 19th show 27,642 deaths, but these include some returns for a fortnight. The Bombay Presidency reports 1035, Bengal 3261, the United Provinces 9211, the Punjab 10,787, Burma 332, the Central Provinces 1068, and Rajputana 1775. There is a great increase in mortality in the Punjab. It is curious to note that the incidence of plague in Bengal varies in a remarkable way from year to year. Thus for 1905 the mortality was 126,000; in the next year it dropped to less than half this number; but in 1907 it again rose to 83,600. In 1908–09 the disease died down except in a few centres, and less than 16,000 deaths were reported. The epidemic was a very local one, as two-thirds of the mortality was in the Patna division, the Monghyr district alone returning nearly one-fifth of the deaths. Bengal has never suffered to the same extent as the Bombay Presidency, the United Provinces, and the Punjab. Calcutta has been spared the terrible mortality which has swept cities such as Bombay and Poona, but plague retains its hold upon parts of Behar and the western districts. It is officially stated that inoculation is still viewed with great distrust by the people, and not more than five or six thousand persons submit themselves to this prophylactic treatment each year. Villagers prefer to evacuate their houses, and in this way some good is effected. It is to be regretted that plague has again appeared in epidemic form in Bengal, a weekly mortality of over 2000 being now reported.

A Pasteur Institute for Assam.

The question of establishing a Pasteur Institute in Assam was raised by Mr. J. R. Macnamara so far back as 1906, when there had been a succession of cases of dog-bites among the employees of the Assam Company. But at that time no station could be found in the province with a sufficiently low temperature for the manufacture of the antirabic serum. Scientific discoveries have since then made it possible to prepare the serum in comparatively high temperatures, and last year the subject was reopened. The India Tea Association was

communicated with, and eventually a small committee, consisting of Mr. Macnamara, Dr. G. C. Winchester, and Dr. W. A. Murray, was appointed to investigate the question. Their report has just been published, and it shows how necessary it is to establish a Pasteur Institute in Assam. During the last four or five years 260 cases of bites by rabic animals have been reported in the province, and of these 16 were sent to Kasauli. There were 60 deaths among the persons bitten. These figures relate only to Assam, and it is probable that they would be doubled or trebled if there had been any record of cases in the more densely populated tracts of Eastern Bengal. The cost of sending patients to Kasauli is heavy, and the long journey, extending in some instances to seven days, lessens the chance of successful treatment. The advantages, therefore, of a local institute are obvious, and it could also be a centre of research for tropical diseases such as kala-azar and blackwater fever. The staff would have ample time for this kind of research work, and as trained bacteriologists would be employed the general results gained would be of the highest value. The committee considers that there would be possibilities for the carrying out of research work unrivalled in any part of the world. The expense involved is not excessive. A capital expenditure of Rs.35,000, in the first instance, would have to be met, and there would be an annual outlay of Rs.9600, if the services of a director and his assistant were given by Government. The small station of Haflong, which is on the railway, seems indicated as a suitable place for the institute. Considering the enormous amount invested in the tea-gardens of Assam there should be little difficulty in raising the sum required. Burma has recently provided Rs.160,000 for a Pasteur Institute, and Eastern Bengal and Assam should be equal to finding more than this, as the big firms in Calcutta and London interested in the tea industry might be asked to subscribe. An endowment fund would have to be provided, and the Government would doubtless give a helping hand.

Sikh Officers in the Indian Medical Service.

It is officially notified that Sikhs serving in the Indian Medical Service are permitted to retain their hair uncut (in accordance with their caste custom) and to wear puggris instead of helmets when in uniform. This order is also applicable to Sikhs undergoing probationary courses at the Royal Army Medical College, London, and Royal Army Medical Corps Depôt at Aldershot.

Civil Surgeoncies in India.

At a recent meeting of the Imperial Legislative Council held at Calcutta, His Excellency the Viceroy presiding, the Hon. Mr. Hague asked for information concerning the number of civil surgeoncies held by the assistant surgeon branch of the subordinate medical department. Replying to Mr. Hague's questions, Sir Harvey Adamson said that the number of civil surgeoncies to be transferred to civil assistant surgeons has been increased since 1899 from 28 to 33. Four of the five new appointments have been added to the list during the last year. Civil assistant surgeons hold 22 of these appointments substantively, 3 in Madras, 3 in Bombay, 1 in Bengal, 4 in the United Provinces, 3 in the Punjab, 4 in Burma, 3 in Eastern Bengal and Assam, and 1 in the Central Provinces. Eleven more medical officers of this class were officiating as civil surgeons on Jan. 1st last. Of the 7 appointments in Bengal, which it was decided in 1899 to transfer to civil assistant surgeons when opportunities offered, 4 are now allotted to Bengal proper and 3 to Eastern Bengal and Assam. It was recognised in 1899 that the arrangement could not be given effect to pending the retirement of the uncovenanted medical officers, European and Indian, then employed in the several provinces. The local governments concerned are aware that the appointments still to be transferred are to be given to civil assistant surgeons when opportunities offer, and the Government of India do not think that it is necessary for them to issue any further orders on the subject. The Government of India have given full and sympathetic consideration to the memorials of civil assistant surgeons in Bengal and to the proposals made to them by the Government of Bengal. They are now about to address the Secretary of State on the subject, and are consequently unable at present to give the information asked for by the honourable member.

Cinchona Bark.

In the Bengal Budget for 1910–11 provision is made for the purchase of no less than two lakhs worth of cinchona bark to supplement the out-turn of the Government plantations. It would be of interest to know whether the purchase is to be made in Holland as heretofore or whether there will be direct buying in Java. The latter course would seem to be the more economical one, as otherwise the bark bought will have travelled all the way from Java to Europe and half-way back again before it reaches the Bengal factory. It is to be hoped that an effort will be made to keep down the prices of quinine sold by State agency, as in the last few years these have compared very unfavourably with the rates quoted by wholesale chemists in India.

April 2nd.

NOTES FROM CHINA.

(FROM OUR OWN CORRESPONDENT.)

The Water-supply of Peking.

THE establishment of a water-supply in Peking, a city of over 600,000 inhabitants and covering an area of 25 square miles is an event of the first importance in public health and sanitary engineering. Hitherto the capital has been dependent on a supply from domestic shallow wells, of which there are thousands. These wells yield a very hard (over 30 degrees), impure water, which increases the sick-rate and is only kept within limits here by being rarely drunk unboiled, thanks to the tea-drinking habits of the people. Notwithstanding this, intestinal complaints, such as typhoid fever, dysentery, diarrhœa, and worms abound. In the Quartier Diplomatique deep wells, ranging from 170 to 300 feet, have been sunk in the various Legations and yield an unlimited supply of pure bacteria-free water averaging 10 degrees of hardness. But with the progressive spirit so much in evidence it was felt that a supply of good, soft, upland-surface drinking water would be appreciated sufficiently to make its installation a paying concern. A Chinese company, with no foreign participation, was therefore formed with a capital of 3,000,000 taels (about £400,000). A good supply of water was available from the Sha Ho, one of a series of rivers running south-east from the great mountain range lying north-west of Peking separating China from Mongolia. This is a shallow river with sandy bed rarely over 2 feet in depth and liable to flood in summer. In winter, though frozen over, the current is too strong for it to freeze through its whole extent and water can always be drawn from beneath the ice coating. Leaving the mountains it passes through cultivated land with a scattered population. No sewers empty into it, as all excreta are applied directly to the fields by the farmers, and the organic matters are thus oxidised by atmospheric oxygen. The intake pipe is at a spot on the river bed 10 miles north-east of Peking. At this place it is estimated that 35,000,000 gallons a day flow past the opening, and of this quantity the waterworks could take up and deal with 3,500,000 gallons or about 150,000 gallons per hour. This is very largely in excess of the demand as not more than 160,000 gallons are used daily. As there had been some discussion as to the advisability of substituting "laid-on" water for that from the deep wells I recently visited the company's works and was very favourably impressed. From the intake pipe the water is drawn through two centrifugal pumps and sent by them to settling tanks. From these it flows over a number of covered filtration beds, where it percolates through a layer of bricks, 4 feet of fine river sand, and 1 foot of gravel. After this it enters the main engine room and is pumped on to the city station, where there are three covered reservoirs of 400,000 gallons capacity each. At this station there is also a water tower, 160 feet high, up which the water is pumped, whence it flows by gravitation throughout the city, being supplied to consumers by street hydrants. of which there are 420, each in charge of a coolie, So little demand has been made for private supply that there are not more than 20 meters at present in use. The main and distributing pipes are of the best type—a German patent called the Mannesmann process, by which a tube of solid forged steel is immersed in a bath of boiling asphalt, which is ingrained in the metal to such an extent that pipes which have lain in sea-water for 30 years have been found quite unaffected. The machinery is also German made and the works have been built under the superintendence of an experienced Danish engineer, Mr. Gimbel. The cost to

consumers is about 10*d.* per 1000 gallons. One hour's pumping a day is sufficient for all the water required. Having now provided an ample supply the company's main business will be to create the demand, for the present rate of consumption only represents a fraction of a gallon per head. In Peking the use of water for personal ablution is reduced to a minimum, as Chinese hardly ever take baths, and there is, moreover, no system of water-borne sewage, nor are there any big manufactories consuming water to any extent. The company will also have to contend with thousands of private wells and an organised system of water-supply from street wells in the hands of a guild of water-carriers. It is interesting to note that the £1 shares now stand at 30*s.* and a divident of 8 per cent. has already been paid, evidently *pour encourager les autres*, as it has been derived from capital, the water having only been turned on for the first time some weeks ago.

April 6th.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—At examinations held in April the following candidates passed in the subjects indicated:—

Surgery.—H. R. L. Allett (Section II.), Sheffield; M. Graves (Section II.), London Hospital; F. F. L. How (Section I.), Middlesex Hospital; B. J. Nolan, Dublin and St. Bartholomew's Hospital; L. M. Potter (Section II.), Geneva and Royal Free Hospital; and G. W. Simpson (Sections I. and II.), London Hospital.

Medicine.—C. S. Foster (Sections I. and II.), Middlesex Hospital; M. Graves (Section II.), London Hospital; C. Pyper (Section I.), Leyden and University College Hospital; L. M. Potter (Section II.), Geneva and Royal Free Hospital; A. H. Rich (Section II.), University College Hospital; H. Stanger (Section II.), Leeds; and W. H. Watson (Section I.), Guy's Hospital.

Forensic Medicine.—K. Baylis, Royal Free Hospital; A. Cordon, Birmingham; M. Graves, London Hospital; C. Pyper, Leyden and University College Hospital; F. C. V. Thompson, Guy's Hospital; and R. P. Wylde, Manchester.

Midwifery.—A. Cordon, Birmingham; H. P. Jelley, Edinburgh; and F. C. V. Thompson, Guy's Hospital.

The diploma of the Society was granted to the following candidates entitling them to practise medicine, surgery, and midwifery:—K. Baylis, M. Graves, H. P. Jelley, B. J. Nolan, and L. M. Potter.

CONJOINT EXAMINING BOARD OF SCOTLAND.—At the recent examinations of the Royal College of Physicians of Edinburgh, the Royal College of Surgeons of Edinburgh, and the Royal Faculty of Physicians and Surgeons of Glasgow, held in Glasgow, the following candidates were successful:—

First Professional Examination.—Cyril Popham, James Fitzpatrick, Jeremiah John O'Connell, John Joseph Mulvey, and Violet Millicent Tracey.

Second Professional Examination.—Michael M'Closkey, Andrew Wilson Cochrane, George Agincourt Hodges, William James Hogg, John Edward Rees, and Elliot Paxton Dewar.

Third Professional Examination.—Tom Entwisle Ferguson, Bepin Chandra Sen, Colin Hunter, David Lindsay Hutton, Kedar Nath, James Alfred Frost, and Thomas Nicholson Wilthew.

Final Examination (admitted L.R.C.P.E., L.R.C.S.E., and L.R.F.P.S.G.).—Harold Hope Scott, James Denis Collins, Robert Anderson, George Wallace, Evan Alan Sivell Shaw, and Hopetoun Edward Bond.

FOREIGN UNIVERSITY INTELLIGENCE.—*Göttingen:* Dr. Otto Friedrich Bernhard von Linstow, *Oberarzt*-General, has been granted the title of Professor. *Innsbruck:* Dr. Adolf Posselt, *privat-docent* of Medicine, has been promoted to an Extraordinary Professorship. Dr. Gustav Bayer has been recognised as *privat-docent* of General and Experimental Pathology.—*Kiel:* Dr. Wilhelm Pfeiffer, First Assistant in the University Medical Clinic, has been appointed *Oberarzt*. Dr. Rudolf Hoeber, *privat-docent* of Physiology, has been granted the title of Professor.—*Königsberg:* Dr. Ludwig Wrede, *Oberarzt* of the University Surgical Clinic and *privat-docent* of Surgery, has been granted the title of Professor.

ROYAL INSTITUTION OF GREAT BRITAIN.—The Friday evening discourse next week (May 6th, at 9 o'clock) will be delivered by Sir Almroth E. Wright, who will take as his subject Auto-inoculation. The following three lectures will be delivered at 3 P.M.:—On Tuesday, May 3rd, Dr. Frederick W. Mott, Fullerian professor of physiology R.I., on the Mechanism of the Human Voice (Lecture II.); on Thursday, May 5th, Mr. Walter McClintock, on Blackfeet Indians in North America (Lecture II.); on Saturday, May 7th, Mr. D. H. Scott, on the World of Plants before the Appearance of Flowers (Lecture II.).

FIFTEENTH INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY.—We are asked to state that the next Congress will probably be held in Washington, D.C., towards the end of the month of September, 1912.

EAST-END MOTHERS' LYING-IN HOME.—The annual meeting of the friends of this institution will be held at the Mansion House on May 11th. The Bishop of Stepney will speak in support of the work done by the institution, which deserves wider financial support.

THE City of London Hospital for Diseases of the Chest (Victoria Park) will hold a festival dinner on Thursday, May 12th, at which the Hon. L. Walter Rothschild will preside. The dinner will take place at the Trocadero Restaurant and further information can be obtained from the secretary to the hospital.

A MEDICAL CONGRESS IN JAPAN.—A five-days' congress of medical men has lately been held at Osaka, Japan. It is stated that over 3000 medical men were in attendance, and that over 700 addresses were either read or taken as read at the gathering. The subject of beri-beri was discussed at the congress, which appears to have come to the conclusion that there can be no question about a rice diet being the prime cause of the disease. Professor Shiga and Professor Togo described the results of experiments made by them in feeding barn-door fowls and monkeys on rice alone, and from these experiments it became perfectly clear that the disease is produced by such a diet, though, of course, rice may not be the only determining factor. Dr. Adachi attracted much attention by a discourse on the difference between the structure of Japanese and Occidental blood-vessels.

THE CARE OF THE CHILD.—As director of the National Society for the Prevention of Cruelty to Children Mr. Robert Parr has had special opportunities of studying the child question and the effects of legislation in respect to the treatment of the child. In a little book which he has just issued under the title of "Wilful Waste," he reviews in a plain manner the conditions of child life to-day. In the several chapters dealing with infantile mortality, physical and mental deficients, paupers, child labour, and so forth, he throws out many thoughtful suggestions for the preservation of child life and shows the need for a strong impelling force to induce local authorities to take advantage of existing legislation, and to recognise more fully the value of hygiene among school children. In this connexion he naturally lays stress on the importance of medical inspection, but thinks also that one of the first requirements in bringing about better conditions is the formation of a new Government department to deal solely with children. Everyone will not agree with this view. Separate courts of law have a good reason as have separate food menus for children; but after all children are men and women in miniature, and must not be treated as a third species in every relation of life. The book is published by the National Society for the Prevention of Cruelty to Children, Leicester-square, London, W.C., at the price of 6*d.*, and is one which should certainly stimulate thought upon a subject vital to the interests of the nation.

INTERNATIONAL HYGIENE EXHIBITION, DRESDEN (May—October, 1911).—The first conference of the British Executive Committee of this exhibition, presided over by Professor Pannwitz (the official delegate of the German National Committee), took place at the Hotel Cecil on March 11th last, as reported in THE LANCET of March 26th, p. 871. A second conference of the same committee will be held at the Prince's Hall, Hotel Cecil, London, on May 5th next, at 3.30 P.M. The agenda consist of the following items: (1) Election of chairman; (2) formation of British National Committee; (3) election of President and Vice-President; (4) appointment of Executive Committee. About 250 ladies and gentlemen (hygienists and others) have been invited to attend the meeting and 12 different societies have been asked to send delegates. The British Government has now received the invitation from the German Government to take part in the exhibition, and this invitation, it is believed, is receiving favourable consideration at the hands of various Government departments. It is

hoped that a large and fully representative National Committee will be formed in order that the success of the undertaking may be assured. The business management of the exhibition issued from Dresden on April 9th an invitation, written in English, to exhibit in the scientific section. Applications to exhibit are requested to be made before July 1st next. The general secretary for the Scientific Department is Regierungsrat Dr. Weber, Zwickauerstrasse 35, Dresden. The office of the British Executive Committee is at 47, Victoria-street, Westminster, London, S.W., and the Organiser of the Scientific Department is Mr. H. W. Armit.

PRESENTATION TO A MEDICAL PRACTITIONER.—On April 21st at Bodmin, Cornwall, the captain of the local fire brigade (Major W. A. Bawden), on behalf of the members, presented Mr. Bartholomew Gidley Derry, L.R.C.P. Lond., M.R.C.S. Eng., with a barometer, bearing a suitable inscription, as a mark of appreciation for his services as honorary medical officer, an appointment he has held for about 40 years.

SHEFFIELD ROYAL HOSPITAL.—At the quarterly meeting of governors held last week the board of management reported having received an intimation that, owing to the recent death of Major-General William H. Randolph Simpson, the hospital had become entitled, under the will of Mrs. Agnes Elizabeth Randolph Simpson, to a bequest of £7000 or thereabouts for the purpose of endowing beds in the hospital to be called the Barker beds. Mrs. Simpson was a daughter of the late Mr. Thomas Rawson Barker.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—A quarterly court of the directors of this society was held on April 13th, Dr. G. F. Blandford, the President, being in the chair. Seventeen members of the court were present. Two members of the society had died since the last court, and their widows applied for assistance on behalf of themselves and their children. In both instances they were without any income whatever, and the court voted grants at the rate of £50 per annum for each widow and £15 per annum for each child. By its by-laws the society can only grant relief to the widows and orphans of its deceased members. Membership is open to any registered medical practitioner who at the time of his election is resident within a 20-mile radius of Charing Cross. Full particulars and application forms for membership may be obtained from the secretary at 11, Chandos-street, Cavendish-square, London, W. The next election will be on July 13th, and application forms must reach the secretary on or before June 22nd. The invested funds of the society now amount to £100,550. The date of the annual general meeting has been fixed for Thursday, May 26th, at 5 P.M.

"THE BULLETIN OF ENTOMOLOGICAL RESEARCH."—We learn that the Entomological Research Committee for Tropical Africa is about to establish a journal to be called *The Bulletin of Entomological Research*, dealing with the entomology of tropical Africa. This journal will contain accounts of the observations made by field-workers which may have any bearing on the subject of economic entomology; descriptions of insect life-histories, with figures of their earlier stages; reports on practical methods for destroying or keeping in check any noxious species; papers by specialists dealing with the systematic classification of such groups as are known to be, or are likely to be, injurious to human beings, live-stock, or agriculture; and so forth. The requirements of medical men, farmers, &c., who have no special knowledge of entomology, will also be kept in view; and fully illustrated papers will be issued from time to time showing, as simply as possible, the characters by which the more important pests may be recognised. In this connexion the value of good illustrations cannot be over-estimated, and it is proposed to make these a special feature of the *Bulletin*. Brief accounts will also be given periodically of any useful work and important discoveries that may have taken place in connexion with economic entomology outside the area with which the research committee is more particularly concerned. It is proposed to issue not less than four parts annually, and additional parts will be published whenever sufficient material is forthcoming. Annual subscribers will be entitled to receive such extra parts without further cost. In order to facilitate the prompt publication of important papers the parts will not be issued at fixed intervals but as occasion requires, though, as far as possible, regularity will be maintained. The subscription for the first year will be 10*s*. The separate parts will also be on sale, the prices varying with the size of the part and the number of illustrations. Subscriptions may be sent to the Scientific Secretary, Entomological Research Committee, British Museum (Natural History), Cromwell-road, London, S.W.

COAL SMOKE ABATEMENT SOCIETY.—The annual meeting of this society will be held at the Royal United Service Institution, Whitehall, S.W., at 3 o'clock P.M., on Wednesday, May 4th. The Very Rev. the Dean of Westminster has consented to address the meeting, and an opportunity will be afforded members freely to express their views; those desirous of doing so are invited to send their names to the secretary.

BRUSSELS MEDICAL GRADUATES' ASSOCIATION.—An extra dinner of this association will be held at the Trocadero Restaurant to-day (Friday) at 7 for 7.30 P.M. Tickets 5*s*. (not including wine). Members are invited to bring ladies. All graduates of the University of Brussels are welcome. Applications for tickets to be made to the honorary secretary, Dr. Arthur G. Haydon, 23, Henrietta-street, Cavendish-square, London, W.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Milk and Dairies Bill.

THE Prime Minister having found that Mr. COURTHOPE'S Milk and Dairies Bill will be treated in some quarters as controversial has declined to give Parliamentary facilities for its progress. It is therefore unlikely that it will obtain a second reading this session. The Bill is now published. In a memorandum it is stated that its objects are:—(1) the more effective registration of dairies and dairymen; (2) the inspection of dairies and the examination of cows therein; (3) the prohibition of the supply of milk from a dairy where such a supply has caused, or would be likely to cause, infectious diseases, including tuberculosis; (4) the prevention of the sale of tuberculous milk; (5) the regulation of the importation of milk so as to prevent danger to public health arising therefrom; and (6) the issue of regulations for securing the supply of pure and wholesome milk.

It is further stated by the promoters of the Bill that the provisions as to registration supersede the provisions as to the registration of dairies contained in the Contagious Diseases (Animals) Acts and the orders made thereunder. The provisions as to the inspection of dairies and the prohibition of the supply of milk reproduce with amendment Section 4 of the Infectious Diseases (Prevention) Act, 1890, Section 71 of the Public Health (London) Act, 1891, and the milk clauses incorporated in many local Acts. It also appears that the clause as to the prevention of the sale of tuberculous milk is taken from the Public Health (Scotland) Act, 1897. The Board of Agriculture and Fisheries have prepared an order under the Diseases of Animals Act, 1894, dealing with the notification of tuberculosis in cattle and the inspection, examination, detention, isolation, and slaughter of tuberculous cattle, and the giving of compensation in appropriate cases.

The Provision of Meals to School Children.

Some interesting comments appear in the report of the Board of Education on the working of the Education (Provision of Meals) Act, 1906, up to March 31st, 1909. Accordingly, the report reviews the two years when the feeding of necessitous school children was being developed in some respects tentatively. The relation which this matter must have to the medical inspection of school children is insisted on. On the results which have followed the Act the report proceeds to state that "it is clearly impossible to say with any precision how far the provision of meals has produced an improvement in the mental condition of the children and has rendered them better able to take, in the words of the Act, 'full advantage of the education provided for them.' The Board drew special attention to this point, and many local education authorities have dealt with it in their reply. In a large number of cases they have confined themselves to a general statement that improvement was shown, and some authorities have dwelt upon the fact that the meals increased the regularity of attendance and thus promoted the education of the children. In some cases it is suggested that the provision of meals, by improving the physical condition of the children, rendered them less likely to remain at home for trifling ailments, but it is obvious that the prospect of a dinner may have made the children more ready to come to school." It must be borne in mind that the report does not deal with the experience of the Act obtained during the past year.

The Medical Member of the Prison Commission.

The Government, on Friday, April 22nd, explained its attitude as to the filling up of the vacancy caused by the retirement of Dr. H. B. DONKIN on the Prison Commission by the appointment of a non-medical gentleman. Sir HENRY CRAIK, who, as the Member for the Universities of Glasgow and Aberdeen, represents a large number of medical graduates, voiced the dissatisfaction that a member of the medical profession had not been appointed. He had previously given notice of a question to the Home Secretary on the same subject to be put in the House of Commons on Monday. However, when the occasion for putting the question came Sir HENRY CRAIK, although present in the House, declined to put it. Mr. CHURCHILL, who desired to supplement the information given on Friday, was anxious to answer it, but the Speaker held he could not do so unless it was actually asked.

Mr. CHURCHILL has, however, made a communication of the reply which he intended to make to Sir HENRY CRAIK. It will be desirable to give both the text of the question on the paper and Mr. CHURCHILL'S intended answer. Sir HENRY CRAIK'S question was as follows: "To ask the Secretary of State for the Home Department whether, when the place on the Prison Commission recently rendered vacant by the retirement of Dr. DONKIN was filled, regard was had to the official minute which was placed on record at the Home Office on the undertaking of the First Lord of the Treasury and of the Home Secretary, when the Prisons Act of 1898 was under discussion, and at the urgent request of Members of the present Government, to the effect that one of the Prison Commissioners should, if possible, be a medical man; and why, in view of the minute so placed on record by their own demand, the vacancy was filled by the gentleman who acted as private secretary to the late Home Secretary."

The reply which Mr. CHURCHILL intended to give was in the following terms: "I am informed that the minute in question was fully considered by my right honourable friend. I cannot do better than read its full terms to the House. 'On the passing of the Prisons Act of 1898 through the House of Commons I was urged to accept an amendment to the effect that one of the Prison Commissioners should always be a medical man. I resisted this on the ground that it was not desirable to tie the hands of the Secretary of State. But I gave an undertaking that I would in some way strengthen the medical element in prison administration. There being a vacancy in the summer of 1898 on the Prison Board, I decided to take the opportunity of fulfilling this promise by appointing Dr. DONKIN to it. But I desire to place upon record that it was not my intention to fetter the action of any of my successors, it being conceivable that there might be possibly as effective, or even more effective, a method of carrying out the pledge which I gave to the House of Commons in some other way. I entirely agree with the object in view.—M. W. RIDLEY.' Lord GLADSTONE, whose interest in prison questions is well known and who was chairman of the committee from which the proposal originally emanated, was not likely to overlook this matter. When the time came for Dr. DONKIN'S retirement from his commissionership, he arranged to retain him in a new position in which he is relieved from his former heavy administrative duties and is able to devote himself to medical questions, and in this way the medical influence in prison administration is maintained and strengthened. Dr. DONKIN'S retirement would have been a very serious loss to the medical side of the prisons; but under Lord GLADSTONE'S arrangement he remains in the position of medical adviser and director of convict prisons, and he is present at all meetings of the Prison Board and has an equal voice in all its decisions. Having thus carried further the policy embodied in the minute quoted above, Lord GLADSTONE was able to meet the enormous increase of administrative duties falling on the Prison Commissioners by appointing to the vacancy a man who is a conspicuously able administrator, and one specially qualified by his previous experience and abilities for carrying on the work of prison reform."

Vital Statistics of Scotland.

The annual report of the Registrar-General on the births, deaths, and marriages registered in Scotland during the year 1909, together with the annual report on vaccination, has just been issued as a Parliamentary Blue-book. The outstanding feature of the report is the lowness of the birth-, death-, and marriage-rates, each of these being the lowest recorded in the 55 years covered by the Registrar-General's returns. The national birth-rate for the year 1909 is 26·36, which is 0·60 below that of 1907, which previously was the lowest record. The marriage-rate is 6·17, which is 0·14 less than the previous lowest record, which occurred in the year 1886. The death-rate is 15·29, which is 0·64 less than that of 1905, which previously was the lowest recorded. The population of Scotland in the middle of 1909 is estimated to have been 4,877,648, made up of 2,384,907 males and 2,492,741 females.

The Vaccination (Scotland) Act, 1907, made the conscientious objection on the part of parents a valid excuse for the non-vaccination of children. A comparison of the vaccination returns of the year under review (1908) with those of the three years before the passing of the Act shows that the number of children now remaining unvaccinated is about 20,000 more than it was before the passing of the measure.

HOUSE OF COMMONS.

WEDNESDAY, APRIL 20TH.

The Vaccination Act, 1907.

Mr. POINTER asked the President of the Local Government Board how many declarations were made under the Vaccination Act, 1907, during the year 1909.—Mr. BURNS wrote in reply: The number of declarations received by vaccination officers during 1909 was approximately 190,690.

The Housing and Town Planning Act.

Mr. BOYTON asked the President of the Local Government Board whether he would state the names and qualifications of the officials already appointed by the Board to whom appeals would be referred under Sections 15, 17, 18, and 19 of the Housing, Town Planning, &c., Act, 1909 (relating to contracts by landlords, closing orders and demolition orders, and the redemption of annuities); and whether he would state the officials appointed for carrying out the duties referred to in Section 26 of the Act (which related to inquiries by Local Government Board inspectors as to unhealthy areas).—Mr. BURNS (by written answer) replied: For the purpose of inquiries in relation to appeals under the sections of the Act referred to, as well as for other inquiries under the Housing Acts, the services of the staff of inspectors attached to the Department will be available. I have increased this staff by the appointment of three inspectors, selected by me from a long list of candidates as specially qualified for this purpose—viz., Messrs. Clifton, Collin, and Leonard. Each of these gentlemen had had ample experience in connexion with building construction. For the purpose of inquiries under Section 16 of the Housing Act, 1890, it will be observed that Section 26 of the Act of last session expressly makes the services of the existing staff available. I have, however, made an addition to the staff of medical inspectors by the appointment of Dr. Carnwath, who was formerly assistant medical officer of health to the Manchester Corporation and who has had special experience in the administration of the Housing Acts.

In reply to another question put by Mr. BOYTON, Mr. BURNS stated that six local authorities had been in communication with the Local Government Board with a view to the preparation of town planning schemes. He did not think it desirable at this stage to make the names of these local authorities public.

THURSDAY, APRIL 21ST.

The Milk and Dairies Bill.

Mr. W. PEEL asked the Prime Minister whether his attention had been called to the Milk and Dairies Bill and to the general desire expressed by the representations of producers and consumers alike that general legislation on this subject should be passed this session; and whether, under these circumstances, he would afford facilities for this Bill to be read a second time upon the day when the committee stage of the Consolidated Fund Bill was taken.—Mr. ASQUITH replied: No, sir, I am afraid not. From the information that reaches me I do not think that the Bill in question can be regarded as non-contentious.

Mr. PEEL asked whether the right honourable gentleman was aware that the President of the Local Government Board, speaking on behalf of the Government, had for the last two years given a pledge to bring in a comprehensive measure dealing with the question of the milk-supply of this country.

Mr. ASQUITH: That is so.

Mr. PEEL: Does not that modify the right honourable gentleman's answer?

Mr. ASQUITH: No; the answer which I have given was settled in consultation with the President of the Local Government Board.

University Education in London.

Sir PHILIP MAGNUS asked the Prime Minister whether he could now give an approximate date for the publication of the report of the Royal Commission on University Education in London; whether the evidence already taken was about to be placed at the disposal of the senate of the university; and whether the evidence to be taken in future would also be so placed.—Mr. ASQUITH answered: I understand from the Chairman that steps are being taken with a view to the publication of the evidence already given before the Royal Commission, which will thus be at the disposal of the senate of the university. It is impossible to give an approximate date for the publication of the report of the Commission. The answer to the third part of the question is that this is a matter wholly within the discretion of the Commission.

The Sanitary Condition of Lewis.

Mr. WEIR asked the Lord Advocate whether the Secretary for Scotland was aware that in the report of the sanitary inspector for Ross and Cromarty attention was directed to the report of the local sanitary inspector for the Lewis district, who urged the necessity of new houses on new sites, separated from one another and from the byres, and seeing that a similar view had been expressed by Dr. Dittmar, the medical inspector for the Local Government Board for Scotland, would he state what action the local authority had taken in the matter, and whether the Local Government Board intended to take any steps to secure an improvement in the sanitary conditions in the townships in the island of Lewis.—Mr. URE wrote in reply: I am aware of the report referred to, but am unable to say what action the local authority, who are primarily responsible, have taken in the matter. The sanitary condition of those townships continues to receive the consideration of the Local Government Board.

Grants to Medical Schools.

Sir WILLIAM COLLINS asked the President of the Board of Education whether any medical schools had made application to the Board for grants as technical institutions; whether such grants had been made; and whether he would state the names of such medical schools as had applied, the amounts of the grants, if any, made, and the conditions, if any, attaching to such grants.—Mr. RUNCIMAN replied: Applications have been received by the Board of Education from the following medical schools for grants under the Regulations for Technical Schools, &c., in respect of the academical year 1909–10:—In London: Charing Cross Hospital Medical School, London Hospital Medical School, London (Royal Free Hospital) School of Medicine for Women, St. George's Hospital Medical School, St. Mary's Hospital Medical School, St. Thomas's Hospital Medical School, University College Hospital Medical School, and Westminster Hospital Medical School. In the provinces: Bristol University Medical School, Durham University (Newcastle-on-Tyne) College

of Medicine, Leeds University Medical School, Liverpool University Medical School, Manchester University Medical School, and Sheffield University Medical School. In the case of one of these schools—St. Mary's Hospital Medical School—recognition was accorded in respect of the year 1908-09. In the case of all of them grants will become payable after the close of the present academical year—i.e., July 31st, 1910—provided that the terms of the regulations are found to have been complied with in each case. The amount of grant which will be made in each case will be calculated in accordance with the terms of the Regulations for Technical Schools, &c., having regard to the work done, and therefore cannot be stated until after the close of the academical year.

Cowsheds and Dairies Order (Ireland).

Mr. MEEHAN asked the Chief Secretary to the Lord Lieutenant of Ireland whether, in the event of district councils resisting the enforcement of the Cowsheds and Dairies Order in Ireland, the Local Government Board was empowered to enforce it and surcharge the district council with all cost incurred thereby; and whether such charge, if any, would be an individual or all union charge.—Mr. BIRRELL replied: The Local Government Board is advised that this order may be enforced against a local authority in the same way as other cases of refusal to discharge statutory duties and it would presumably be competent for the court to award costs against the local authority. Such costs would no doubt be payable out of the district fund, but the auditor would have to decide whether the expense had been incurred in circumstances making it a proper charge against the rates.

Mr. MEEHAN further asked the right honourable gentleman whether he was aware that, if the Cowsheds and Dairies Order was enforced by the Local Government Board, it would have a very damaging effect on the co-operative creamery business in Ireland; and whether, having regard to the fact that it penalised those who sold milk to creameries or otherwise, and would have the effect of compelling farmers to revert to the antiquated system of dairying, he would consider the advisability of instituting an inquiry with a view of amending the Act.—Mr. BIRRELL replied: The Local Government Board has no reason to think that this Order will injure creameries or cause a return to the system of home dairying. There is therefore no necessity for the suggested inquiry.

Food Adulteration in the United States.

Mr. STANIER asked the President of the Local Government Board whether he was acquainted with the report of a committee of inquiry which sat in Chicago in 1899 to examine the food then being exported into England from the United States; and whether he had any information as to whether the various forms of adulteration declared by that committee to be generally practised were still continued.—Mr. BURNS replied: I am acquainted with the report referred to. As a result of that report and subsequent legislation a diminution of misdescription and adulteration of foods has no doubt taken place.

Mr. STANIER also asked the right honourable gentleman whether the Government of the United States of America had, so far as he was aware, held any official inquiry in recent years into the forms of adulteration of articles of food or drink in that country.—Mr. BURNS answered: The answer to the honourable Member's question is in the affirmative as far as regards articles of food and drink.

FRIDAY, APRIL 22ND.

The Medical Member of the Prison Commission.

In the course of the debate on the vote on account,

Sir HENRY CRAIK called attention to circumstances which, he said, gave evidence of a grave administrative scandal. Quite recently there had been appointed as a Commissioner, in the place of the Medical Commissioner of Prisons, whose service expired under the age limit, a young gentleman who was ten years ago a clerk in the Home Office and who recently acted as private secretary to Mr. Herbert Gladstone, now Viscount Gladstone. He did not wish to make this a personal question as the gentleman appointed as the Prison Commissioner was a friend of his own. However, a very considerable public interest was involved in the fair treatment of a great profession like the medical profession. If by the common consent of both parties certain offices had been reserved for those who had medical qualifications, the tradition based on general consent should not be lightly departed from, and if it was departed from the profession in question should have an opportunity of protesting. It was not sufficient to say in reply to the point he raised that there were other officers in the service of the Prison Commissioners who could give the necessary advice in regard to medical matters. That had not been the view taken by the party now in office when the general question of a medical member of the Prison Commission was discussed in the year 1898. If a medical member was necessary in 1898, was he not far more necessary now? Had not questions of the greatest delicacy been raised with regard to prison treatment in which medical experts and their advice were specially required? In regard to the treatment of the lady prisoners—the suffragettes, with regard to whom artificial feeding had had to be resorted to—was medical advice not absolutely necessary in deciding what action should be taken? A medical expert ought to be one of the Commissioners who had to decide on such questions. He referred at length to the undertaking given by Sir Matthew White Ridley in the debate on the Prisons Bill of 1898 that he would appoint a medical man as one of the Commissioners. This was done. A few months ago a question was put to the late Home Secretary (now Viscount Gladstone) with regard to the filling up of the prospective vacancy, and he assured the House that care would be taken to keep up the medical element in the Commission. He (Sir H. Craik) would certainly not accept it as satisfactory to be told that Dr. Donkin or any retired official was going to give a certain amount of supervision and advice. That was a mere subterfuge. The only expert advice which was of any real value was that which was given by a man attending daily at his work at the Prison Commission. By omitting to appoint a medical member injury had been inflicted upon the efficiency of the Prison Commission.

Mr. J. A. PEASE (Chancellor of the Duchy) replied on behalf of the Government. He said that no one believed more than Mr. Herbert Gladstone in the necessity for expert medical advice being secured by the Prison Commissioners. He went on to say that three or four months ago, owing to Dr. Donkin having reached the age of 65, he naturally retired, but so much appreciated had his services been by the Home Office that it was thought desirable to appoint him as a special adviser under a special salary. Dr. Donkin, useful as he was as one of the Commissioners, had to devote a great portion of his time to administrative work, and on his retirement from the Commission at the age of 65 a new arrangement was made by Mr. Gladstone that Dr. Donkin, who was a pensioned official, should receive a salary of £200 a year and devote the whole of his time to the work of adviser to the Prison Commissioners. The effect of that had been that the great medical knowledge of Dr. Donkin had been placed entirely at the service of the Commissioners, and the Commissioners themselves had been strengthened by the appointment of Mr. Waller. It had been suggested that there had been a sort of job in the appointment of the private secretary of Mr. Gladstone to the post. Mr. Waller was a man of conspicuous ability. He had not only proved by his experience in the Services and in the criminal department that he was especially qualified for the post, but as secretary to Mr. Gladstone he showed conspicuous ability in the matter of the reforms which Mr. Gladstone had under his charge. He had proved himself not only to be one of the best qualified men for such a position, but he (Mr. Pease) would say that even if Mr. Waller had not been appointed, in Viscount Gladstone's view, some other individual would have had to be appointed in his place as administrator owing to the excessive amount of work that had now fallen to the Prison Commissioners as administrators. Not only had the question of deterrents been kept in view, but also the question of reformation of those who had been sentenced. There had been a State criminal lunatic asylum established at Parkhurst. Great administrative work had been required in connexion with the introduction of preventive detention. There had also been established State inebriate reformatories. It would have been really impossible to carry out these great administrative changes unless the administrative body had been strengthened by the addition of a capable administrator. In order to carry out this very great work a capable administrator, Mr. Waller, had been appointed.

Mr. BALFOUR pointed out that Dr. Donkin, who was now to give his services as adviser, had no control over the Prison Commissioners. He had not a vote in making decisions, and he could not alter their policy by a hair's breadth. He could only give what would no doubt be valuable advice as the result of his long and honourable career as a Commissioner. That, however, did not carry out the policy laid down in 1898. That policy urged primarily by the party now in office was endorsed by the whole House, and was that there should be on the governing body regulating the prisons a trained medical expert. That policy had been abandoned in order to give well-deserved promotion to a distinguished official. By this abandonment, it seemed to him that not merely was an injury done to the medical profession, but, what was more serious, the declared will of the House of Commons had been set aside without excuse or justification.

Mr. MASTERMAN (Under Secretary of State for the Home Department) said that he was quite willing to acknowledge on behalf of the Home Office that the arrangement was a transitory one. He thought that they would have to come to appoint an additional Prison Commissioner, but for the present someone was needed to grapple with the administrative work thrown upon the Commission by new Acts of Parliament. To meet the difficulty Lord Gladstone appointed a man who was acknowledged to be fully competent to deal with the enormous business of administration and at the same time in addition to retain experience, energy, devotion, and enthusiasm. Anyone who knew Dr. Donkin knew that in the new work which had been given to him he would give a good deal more than the mere monetary value. He had promised so to do, and he was now more free to give time to the medical work than he had been during the last ten years. What he wanted the House to realise was that by this change there had been obtained a man who could give his whole time to the work. There had also been got during a time of transition the same medical officer who would be liberated entirely from administrative work in order to give full time to medical work. That was not a bad arrangement in circumstances of some difficulty.

Dr. HILLIER expressed an emphatic opinion in favour of having an expert medical man actively associated with the administrative work of the Prison Commission.

Sir WILLIAM COLLINS hoped that there would be placed on the Commission a medical member who would take his part on an equal footing and standing with other members.

Sir ROBERT FINLAY thought that an additional Commissioner who should be a medical man ought to be appointed.

The subject then dropped.

MONDAY, APRIL 25TH.

Medical Treatment of London School Children.

Sir WILLIAM COLLINS asked the President of the Board of Education whether an application had been made by the London County Council for the recognition of attendances at hospitals of school children for medical treatment as attendances at school for grant purposes; in the same way as recognition was given in respect of their withdrawal for purposes of medical inspection; and whether he proposed to obviate the loss of grant, which would otherwise be incurred in carrying out the provisions of the Education (Administrative Provisions) Act, 1907, by including in the Code for 1910-11 a provision for such recognition in respect of medical treatment similar to that made under Article 44 (h) in respect of medical inspection.—Mr. RUNCIMAN replied: The answer to the first part of the question is in the affirmative. As regards the second part of the question, I am not prepared to extend the scope of Article 44 (h) of the Code as suggested. I am not satisfied that the case has been made out for such an extension of the scope of the Article, and I am unwilling to add to the obligation of our present system of grants.

Vaccination in Leicester.

Mr. CRAWSHAY WILLIAMS asked the President of the Local Government Board whether his attention had been called to the fact that in the Leicester borough police court on April 20th the vaccination officer of Leicester informed the magistrates that he was ordered by the Local Government Board to take proceedings under Section 31 of the Vaccination Act, 1867, even though such proceedings might have been taken under Section 29 of the Act; would he say on what date such an order was issued; and whether it was a general order to all vaccination officers.—Mr. BURNS replied: No order has been issued in regard to this particular matter. I find that the question of procedure under the two sections has been discussed on more than one occasion, when one of the Board's medical inspectors has been inspecting vaccination in Leicester, and that the inspector did not dissent from the view of the vaccination officer that in the circumstances then obtaining procedure under Section 31 was preferable.

Medical Examination of Special Reserve, Belfast.

Mr. PATRICK WHITE asked the Secretary of State for War how many civilian medical officers were at present engaged, or likely to be engaged, in the Belfast district in connexion with the annual Militia training; would he state the particular localities to which they were attached; how many Army medical officers were there in the same district; and what was the respective cost of army and civilian officers for the same period.—Mr. HALDANE wrote in reply: There are no civilian medical officers at present engaged in connexion with the annual training of the Special Reserve in the Belfast district. However, about 14 will probably be required to assist in the medical examination of the men on their assembling for training. This duty will occupy from one to two days in each case and is paid for at the rate of a guinea a day. There are 17 army medical officers at present serving in the Belfast district and the employment with the Special Reserve will not entail any extra cost on the public.

Asylum Attendants in Ireland.

Answering Captain CRAIG,

Mr. BIRRELL (Chief Secretary to the Lord Lieutenant for Ireland) said that the Inspectors of Lunatics in Ireland informed him that, so far as they were aware, there was no general feeling amongst attendants in Irish asylums that their hours were too long. It was a fact that consumption was very prevalent amongst the insane, but it must be borne in mind that the patients affected in asylums were under constant medical supervision and that efforts were made to keep the insane as much as possible in the open air. The inspectors did not consider that the statement that many attendants died from consumption contracted from patients was correct.

Metropolitan Street Accidents.

Sir WILLIAM COLLINS asked the Secretary of State for the Home Department to state the number of persons injured in the streets within the metropolitan area as the result of accidents known to the police during the year 1909, and how many of these terminated fatally.—Mr. CHURCHILL wrote in reply: The total number of persons injured in the streets in the Metropolitan Police District last year is not at present available, and would take some time to compile. But 16,842 accidents caused by vehicles and resulting in personal injury are known to the police to have occurred during 1909. Of these 306 cases ended fatally.

TUESDAY, APRIL 26TH.

Metropolitan Ambulances.

Sir WILLIAM COLLINS asked the Secretary of State for the Home Department whether he was prepared to sanction the coöperation of the police in the manner recommended by the Departmental Committee of 1906–9 in the event of the London County Council establishing a rapid ambulance service, summonable by telephone, in accordance with their powers under the Metropolitan Ambulances Act of 1909.—Mr. CHURCHILL wrote in reply: I have not any information as to the intentions of the London County Council in this matter, but I need not say I shall be happy to give my best consideration to any proposal that may be put before me with every desire to sanction, so far as may be practicable, the coöperation of the police.

Mr. HAY MORGAN also asked whether the right honourable gentleman was aware that hand-stretchers were still used by the Metropolitan Police for conveying persons who had suffered serious injuries to the hospital; and whether he would see that the supply of motor ambulances was increased so as to avoid the necessity of resorting to the use of hand-stretchers in cases where time might be a matter of life or death to the person injured.—Mr. CHURCHILL (in a written answer) replied: Hand-stretchers have not been used for this purpose by the Metropolitan Police for many years, but wheeled litters of an approved pattern are so used. The London County Council last year obtained Parliamentary powers for the provision of motor ambulances, and I understand this question is now engaging the attention of the Council.

BOOKS, ETC., RECEIVED.

ADLARD AND SON, London.
Spa Treatment: Selection of Patients and the Choice of a Suitable Spa. By Neville Wood, M.D., M.R.C.P. Price 1*s.* 6*d.* net.

APPLETON, D., AND CO., New York and London.
Nutrition and Dietetics. A Manual for Students of Medicine, for Trained Nurses, and for Dietitians in Hospitals and other Institutions. By Winfield S. Hall, Ph.D., M.D. Price 7*s.* 6*d.* net.

CASSELL AND COMPANY, LIMITED, London, New York, Toronto, and Melbourne.
Radiumtherapy. By Dr. Louis Wickham and Dr. Degrais. Translated by S. Ernest Dore, M.A., M.D. Cantab., M.R.C.P. With an Introduction by Sir Malcolm Morris, K.C.V.O. Price 15*s.* net.

CONSTABLE AND CO., LIMITED, London.
International Council of Women. President: The Countess of Aberdeen. The Health of the Nations. Compiled from Special Reports of the National Councils of Women. Price 1*s.* net.

DULAU AND CO., LIMITED, London.
University of London. Francis Galton Laboratory for National Eugenics. Eugenics Laboratory Memoirs. VIII.: The Influence of Defective Physique and Unfavourable Home Environment on the Intelligence of School Children, being a Statistical Examination of the London County Council Pioneer School Survey. By David Heron, M.A. Price 4*s.*

FISCHER, GUSTAV, Jena.
Die Morphologie der Missbildungen des Menschen und der Tiere. Herausgegeben von Dr. Ernst Schwalbe. III. Teil. Die Einzelmissbildungen. III. Lieferung. 2. Abteilung. 4. Kapitel. Missbildungen des Herzens und der Grossen Gefässe. Von Gotthold Herxheimer. Price M.5.

HARDING BROTHERS AND COMPANY, Westminster, London.
Radium. By John Perceval Lord. Third edition. Price 2*s.* 6*d.* net

KARGER, S., Berlin.
Jahrbuch für Kinderheilkunde und physische Erziehung. Unter Redaktion von O. Heubner und Th. Escherisch. 71. der dritten Folge. 21 Band, Heft 4. Ausgegeben am 1 April, 1910.

KEGAN PAUL, TRENCH, TRÜBNER AND CO., LIMITED, London.
The Martyrdom of Man. By Winwood Reade. Eighteenth Edition. With an Introduction by F. Legge. Price 5*s.*

"LA SEMANA MEDICA," IMPRENTA DE OBRAS DE EMILIO SPINELLI, Buenos Aires.
Contribución al Estudio de las Alteraciones Cellulares de los Centros Nerviosos en las Formas Graves de la Psicosis Alcohólica. Por el Dr. José T. Borda. (Extracto de la "Revista de la Sociedad Médica Argentina.") Price not stated.

LEHMANN, J. F., München.
Handbuch der Serumtherapie und experimentellen Therapie. Ein Handbuch für Klinik und Praxis. Herausgegeben von A. Wolff-Eisner, Berlin. Price, paper, M.12; bound, M.14.

LEWIS, H. K., London.
A Manual of Medical Exercises. Second edition. By Dr. Percy Lewis. Price 1*s.* 6*d.* net.
The Influence of Strong, Prevalent, Rain-bearing Winds on the Prevalence of Phthisis. By William Gordon, M.A., M.D., F.R.C.P. Price 7*s.* 6*d.* net.
Biological Physics, Physic and Metaphysics. Studies and Essays by Thomas Logan, M.D., Licentiate of the Royal Faculty of Physicians and Surgeons of Glasgow. Edited by Quintin McLennan, M.B., Ch.M., and P. Henderson Aitken, M.A., B.Sc., D.Litt. Vol. I.: Biological Physics. Vol. II.: Physics. Vol. III.: Metaphysics. Price 24*s.* net.

LIPPINCOTT (J. B.) COMPANY, Philadelphia and London.
Serum Diagnosis of Syphilis and the Butyric Acid Test for Syphilis. By Hideyo Noguchi, M.D., M.Sc. Price not stated.

RICHARDS, GRANT, LIMITED, London.
The Birds of the British Islands. By Charles Stonham, C.M.G., F.R.C.S., F.Z.S. With Illustrations by Lilian M. Medland, F.Z.S. In Twenty Parts. Part XVI. Price 7*s.* 6*d.* net.

SAUNDERS (W. B.) COMPANY, Philadelphia and London.
Prescription Writing and Formulary. By John M. Swan, M.D. Price 6*s.* net.
Pocket Therapeutics and Dose-Book. By Morse Stewart, Jr., B.A., M.D. Fourth edition, rewritten. Price 5*s.* net.
Diseases of the Stomach and Intestines. By Robert Coleman Kemp, M.D. Price 25*s.* net.

SCIENTIFIC PRESS, LIMITED, London.
Burdett's Hospitals and Charities, 1910. By Sir Henry Burdett, K.C.B., K.C.V.O. Price 10*s.* 6*d.* net.

SIEGLE, HILL AND CO., London.
Ionic Surgery in the Treatment of Cancer. With a Chapter on Ionization in Surgical Tuberculosis and in Hemorrhoids. By G. Betton Massey, M.D. Price 13*s.* net.

SPOTTISWOODE AND CO., LIMITED, London.
The Medical Register, 1910. Printed and published under the direction of the General Council of Medical Education and Registration of the United Kingdom. Price 10*s.* 6*d.*
The Dentists Register, 1910. Price 3*s.* 4*d.*

SPRINGER, JULIUS, Berlin.
Über den Einfluss der Normal- und Immunsera auf die Phagocytose. Von Prof. Dr. F. Neufeld. (Sonderabdruck.) Price not stated.
Über elektive Choleranährböden, insbesondere den Dieudonnéschen Agar. Von Prof. Dr. F. Neufeld und Dr. Wolthe. (Sonderabdruck.) Price not stated.

UNWIN, T. FISHER, London and Leipsic.
Appendicitis. When should one Operate? By Dr. Julius Baumgärtner, Geheimer Medizinalrat. Translated from the Second German Edition by Amy M. Mander and revised by L. Martindale, M.D. Price 1*s.* net.

URBAN UND SCHWARZENBERG, Berlin und Wien.
Die experimentelle Pharmakologie als Grundlage der Arzneibehandlung. Ein Lehrbuch für Studierende und Aerzte. Von Dr. Hans H. Meyer, Wien, und Dr. R. Gottlieb, Heidelberg. Price M.12.

VOGEL, F. C. W., Leipzig.
Archiv für Experimentelle Pathologie und Pharmakologie. Redigirt von Dr. B. Naunyn und Dr. O. Schmiedeberg. 62. Band, 4 u. 5. Heft. Ausgegeben 15. April, 1910.

WILLIAMS AND NORGATE, London.
Super-Organic Evolution. Nature and the Social Problem. By Dr. Enrique Lluria. With a Preface by Dr. D. Santiago Ramon y Cajal. Translated by Rachel Challice and D. H. Lambert, B.A. Oxon. Price 7*s.* 6*d.* net.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

ANDERSON, H. GRAEME, M.B., Ch.B. Glasg., F.R.C.S. Eng., has been appointed Registrar and Pathologist to the Metropolitan Hospital.

BALLANCE, HERBERT STANLEY, M.D., B.S. Lond., L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Surgeon to the Weston-super-Mare (Somerset) Hospital and Dispensary.

BAYLISS, A. D. E., M.R.C.S., L.R.C.P. Lond., has been appointed House Physician at University College Hospital.

BREBNER, C. S., M.D., B.S. Edin., D.P.H. Cantab., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Widnes District of the county of Lancaster.

DALLY, J. F. HALLS, M.D. Cantab., M.R.C.P. Lond., has been appointed Assistant Physician to the National Hospital for Diseases of the Heart, Soho-square.

DAWNAY, A. H. PAYAN, F.R.C.S. Eng., has been appointed Assistant Surgeon to the Western Ophthalmic Hospital, Marylebone-road.

FLETCHER, JAMES, M.D., C.M., D.P.H. Aberd., has been appointed Medical Superintendent of Monsall Fever Hospital, Manchester.

GALLAGHER, FLORENCE A., M.B., B.S. Glasg., has been appointed Assistant Resident Medical Officer to the Merthyr Tydvil (Glamorganshire) Workhouse Infirmary.

HOWARTH, W. G., M.B., B.C. Cantab., F.R.C.S. Eng., has been appointed Surgeon to the Throat, Nose, and Ear Department at the Queen's Hospital for Children.

MCILROY, ALEXANDER JOSEPH, M.B., M.S. Edin., has been appointed Public Vaccinator for the District of Clutha, New Zealand.

MILLS, A. E., M.B., Ch.M. Syd., has been appointed Lecturer in the Principles and Practice of Medicine in the University of Sydney, New South Wales.

PORTER, HERDMAN, M.B., Ch.B. Edin., has been appointed Clinical Assistant to the Ear and Throat Department, Prince of Wales Hospital, Tottenham.

SCOTT, GEORGE MELMOTH, M.D. Cantab., has been appointed Public Vaccinator for the District of Marton, New Zealand.

THORBURN, WILLIAM, M.D., B.S. Lond., F.R.C.S. Eng., has been appointed Professor of Clinical Surgery in the University of Manchester.

TODD, R. H., M.D. Dub., F.R.C.S. Irel., has been appointed Lecturer in Medical Jurisprudence, University of Sydney, New South Wales.

WILSON, ALEXANDER, M.B., Ch.B. Aberd., has been appointed Assistant to the Professor of Anatomy in Sheffield University.

YELF, R. E. B., M.B., M.S. Edin., has been appointed Medical Officer of Health to the Stow-on-the-Wold Union.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BATH, ROYAL MINERAL WATER HOSPITAL. Resident Medical Officer. Salary £100 per annum, with lodging, board, and washing.

BIRMINGHAM AND MIDLAND EAR AND THROAT HOSPITAL, Edmund-street.—House Surgeon for six months. Salary at rate of £70 per annum, with board, lodging, and washing.

BIRMINGHAM, ROYAL ORTHOPÆDIC AND SPINAL HOSPITAL.—Honorary Surgeon.

BRIDGWATER HOSPITAL.—House Surgeon, unmarried, for six months. Salary at rate of £100 per annum, with board, lodging, and washing.

BRIGHTON COUNTY BOROUGH ASYLUM, Haywards Heath.—First Assistant Medical Officer and Pathologist, unmarried. Salary £250 per annum, with apartments, board, laundry, and attendance.

BRIGHTON, SUSSEX COUNTY HOSPITAL.—Secretary. Salary £250 per annum, with £100 in lieu of apartments and board.

BRISTOL GENERAL HOSPITAL.—Medical and Surgical Registrars.

BRISTOL ROYAL INFIRMARY.—Honorary Medical Registrar.

CANTERBURY, KENT AND CANTERBURY HOSPITAL.—House Surgeon, unmarried. Salary £80 per annum, with board, lodging, and washing.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Clinical Assistant.

CHESTER, COUNTY ASYLUM.—Third Assistant Medical Officer, unmarried. Salary £160 per annum, with board, lodging, and washing.

COVENTRY AND WARWICKSHIRE HOSPITAL.—Honorary Aural Surgeon.

DEVONPORT, ROYAL ALBERT HOSPITAL.—Assistant Resident Medical Officer, unmarried, for six months. Salary at rate of £50 a year, with board, apartments, and laundry.

DOUGLAS, NOBLE'S ISLE OF MAN GENERAL HOSPITAL AND DISPENSARY.—Resident House Surgeon, unmarried. Salary £90 per annum, with board and washing.

GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION.—Assistant House Surgeon for six months. Salary at rate of £80 per annum, with board, residence, and washing.

GUILDFORD, ROYAL SURREY COUNTY HOSPITAL.—Assistant House Surgeon. Salary £50 per annum, with board, residence, and laundry.

HALIFAX, ROYAL HALIFAX INFIRMARY.—Second House Surgeon, unmarried. Salary £100 per annum, with residence, board, and washing.

HEMEL HEMPSTEAD, WEST HERTS HOSPITAL.—House Surgeon. Salary £100 per annum, with rooms, board, and washing.

HOSPITAL FOR EPILEPSY AND PARALYSIS AND OTHER DISEASES OF THE NERVOUS SYSTEM, Maida Vale, W.—Resident Medical Officer for six months. Salary at rate of £50 per annum, with board, lodging, and washing.

HULL, ROYAL INFIRMARY.—House Physician, unmarried. Salary £100 per annum, with board and apartments. Also Assistant House Surgeon. Salary £80 per annum, with board and lodging. Also Casualty House Surgeon. Salary at rate of £60 per annum, with board and lodging.

ITALIAN HOSPITAL, Queen-square, W.C.—Honorary Assistant Physician. Also Honorary Anæsthetist.

LEICESTER INFIRMARY.—Assistant House Physician and Assistant House Surgeon. Salary at rate of £60 per annum, with board, apartments, and washing.

LONDON COUNTY COUNCIL.—Medical Examiner to Men working in Compressed Air at Woolwich Tunnel. Salary at rate of £10 a month.

LONDON HOSPITAL, Whitechapel, E.—Assistant Surgeon. Also Surgeon.

LONDON THROAT HOSPITAL, 204, Great Portland-street, W.—House Surgeon for six months. Salary £50 per annum.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST.—Resident Medical Officer. Salary £100 per annum, with board, apartments, and washing.

MILLER GENERAL HOSPITAL FOR SOUTH-EAST LONDON, Greenwich-road, S.E.—Honorary Physician.

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Hampstead and Northwood, Middlesex.—House Physician. Salary £75 per annum, with board and residence.

NOTTINGHAM GENERAL HOSPITAL.—Locum Tenens. Salary £45, with board, lodging, and washing.

PAISLEY, INFECTIOUS DISEASES HOSPITAL.—Resident Medical Officer and Assistant Bacteriologist. Salary £130 per annum, with board, washing, and attendance.

PLYMOUTH, SOUTH DEVON AND EAST CORNWALL HOSPITAL.—House Surgeon. Salary £100 per annum, with board, residence, and washing. Also House Physician. Salary £75 per annum, with board, residence, and washing.

PRESTON, LANCASHIRE EDUCATION COMMITTEE.—Two School Medical Inspectors. Salaries £250 per annum.

ROYAL NATIONAL ORTHOPÆDIC HOSPITAL, 234, Great Portland-street, W.—Resident House Surgeon, unmarried. Salary £100 per annum, with board, residence, and washing. Also Honorary Anæsthetist.

ROYAL NAVAL MEDICAL SERVICE.—Examination for Fifteen Commissions.

SALFORD UNION INFIRMARY, Hope, Pendleton.—Resident Assistant Medical Officer. Salary £120 per annum, with apartments, attendance, and rations.

SAMARITAN FREE HOSPITAL FOR WOMEN, Marylebone-road, N.W.—Clinical Assistants.

SHEFFIELD ROYAL HOSPITAL.—Assistant House Physician, unmarried. Salary £50 per annum, with board, lodging, and washing.

SHEFFIELD, WEST RIDING ASYLUM, Wadsley.—Fifth Assistant Medical Officer. Salary £140 per annum, with board, &c.

SOUTHWARK UNION INFIRMARY, East Dulwich-grove, S.E.—Assistant Medical Officer. Salary £100 per annum, with board, lodging, and washing.

STOKE-ON-TRENT, NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill.—Junior House Surgeon for six months. Salary at rate of £50 per annum, with board, apartments, and washing.

SWANSEA GENERAL AND EYE HOSPITAL.—House Physician. Salary £75 per annum, with board, washing, and attendance.

TYNEMOUTH, VICTORIA JUBILEE INFIRMARY, Spring Gardens, North Shields.—House Surgeon. Salary £100 per annum, with rooms, board, &c.

VENTNOR, ROYAL NATIONAL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Two Assistant Resident Medical Officers, unmarried. Salary £100 per annum each, with board and lodging. Also Holiday Locum Tenens for four months. Salary £3 3*s.* per week.

VICTORIA HOSPITAL FOR CHILDREN, Tite-street, Chelsea, S.W.—House Surgeon for six months. Salary £30, with board, lodging, and laundry.

WESTERN OPHTHALMIC HOSPITAL, Marylebone-road, N.W.—Honorary Anæsthetist.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House Surgeon. Salary £80 per annum, with board, rooms, and laundry.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies as Certifying Surgeons under the Factory and Workshop Act at Blackford, in the county of Perth; at Radstock, in the county of Somerset; and at Gainsborough, in the county of Lincoln.

Births, Marriages, and Deaths.

BIRTHS.

BUNTING.—On April 22nd, at Hagley-road, Edgbaston, the wife of W. Hartley Bunting, M.D., F.R.C.S. Edin., of a daughter.

GLASIER.—On April 25th, at Mildenhall, Suffolk, the wife of Howard Glasier, M.A., M.B. Cantab., M.R.C.S., of a daughter.

GOUGH.—On April 22nd, at Glenallon, Torquay, the wife of John Harley Gough, M.D., B.Sc., F.R.C.S. Edin., of a son.

HARRIS.—On April 23rd, at Wimpole-street, W., the wife of Dr. Wilfred Harris, of a son.

HAY.—On April 18th, at Lincoln-road, Peterborough, the wife of William Peach Hay, M.B., C.M., of a son.

MURPHY.—On April 21st, at Waterloo-crescent, Dover, the wife of Charles E. Murphy, F.R.C.S., of a daughter.

WOAKES.—On April 26th, at 46, Wimpole-street, the wife of Claud Woakes, of a daughter.

MARRIAGES.

BURTON-MARSHALL—BORASTON.—On April 21st, at St. Peter's, Eaton-square, S.W., William Burton-Marshall, M.B., B.C. Cantab., M.R.C.S., &c., to Kathleen, younger daughter of Mr. John Boraston.

JEFFERISS—GILL.—On April 21st, at St. Martin's, Herne, by the Rev. Giles Daubeney, M.A., Frederick Burroughs Jefferiss, F.R.C.S., son of W. R. S. Jefferiss, M.D., of Chatham, to Marjorie Emilie, youngest daughter of Edwin Gill, of St. Brelades, Herne Bay, and Rochester.

DEATHS.

CAPPE.—On April 22nd, at Belsize-square, N.W., Herbert Nelson Cappe, M.R.C.S., L.R.C.P. Lond., Senior Medical Officer, Surrey County Asylum, Brookwood, aged 44 years.

EDGINTON.—On April 20th, at St. Thomas's Hospital, Alfred Dudley Edginton, M.R.C.S., L.R.C.P., of 154, High-street, Battersea, aged 50 years.

SPARKES.—On April 23rd, at the Cambridge Hospital, Aldershot, Claude Stephen Sparkes, Lieutenant-Colonel R.A.M.C., on his 51st birthday.

N.B.*—*A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE SOOTHER.

To the Editor of THE LANCET.

SIR,—The "monthly nurse" has the greatest influence for the use or banishment of the "soother." Every woman, I presume, in the middle and lower middle classes engages a "monthly nurse" for her confinement. For the first two or three weeks that nurse's word is law as far as the baby is concerned. She uses a soother that the mother may not be worried by baby's crying. Eighteen to thirty years ago I found some difficulty in preventing the nurse using the soother, but events have proved I could not do it at all now. Having seen the more than usual bad effects on one child, when asked to find a nurse for a mother expecting her first baby, I tried my best to get one who would not use a "soother." One trained nurse wrote: "I could not help laughing at what you say about the dummy, and felt sorry for the poor young mother, when she wants to work and the baby won't be good," &c.! She thought evidently I was quite behind the times. I eventually engaged an untrained woman who said she did not use a soother. (This was an elderly woman seldom without a case.) When she had gone at the end of the month she certainly had not used the soother, though one had been duly bought, but I found she had given bread, sugar, and *something* (I forget what now) tied up in the corner of a *handkerchief*. To continue this plan seemed too awful, and as the baby would not lie down without something to suck a soother had to be bought after all. Many will say patience and perseverance would have conquered the habit, but as on two or three occasions the child deprived of the soother screamed until she was blue, I thought perseverance had been exhausted. It is in the first few weeks that the habit of sucking is made and cannot easily be broken. There is one reason, I consider, why the nurse of to-day insists on using a soother. She is taught such hard-and-fast rules about the times of feeding. The baby is to be fed at first every two hours; even if asleep to be roused. That seems so unnatural. A baby is an animal, not a mechanical toy. What other animal is fed at certain times and no other and not allowed to have its sleep out? I think (but I am not a doctor) a baby, if normal, should not be roused to be fed. It should be fed just as long as it will really feed, not the present hard-and-fast 20 minutes. Now, if it starts crying again and nothing will stop it, it is better to feed it again than to use the soother. I quite agree that it cannot be allowed to cry for an hour and forty minutes. If the baby is breast-fed, who is to know how much it has had? If the soother has been used it has been probably too tired to take but little. If brought up by hand, the nurse can see how much the baby has taken and can act accordingly. It is better even then to give a little more food than to use the soother.

I am, Sir, yours faithfully,

April 23rd, 1910. ANOTHER GRANDMOTHER.

*** Since a "Grandmother" contributed to our columns on this subject we have received quite a large number of letters from other grandmothers, and we have come to the conclusion that grandmothers form a very wise and observant class. We cannot publish the letters which we have received because our space is required for medical correspondence, nor do we endorse everything in the above letter. We agree, however, with the general opinion that soothers are mischievous appliances and that their use is due in many instances to the initiative of the monthly nurse.—ED. L.

TEACHING OF HYGIENE IN TRAINING COLLEGES.

THE Board of Education in its annual report for 1908–09, just issued, states, in the section dealing with the training of teachers, that up to 1907 hygiene had been taken by a certain number of students at particular colleges, but no systematic provision was made for instruction in that subject. In 1907, however, the Board issued a new syllabus in hygiene, which was required to be included in the curriculum of every training college, except in the case of students taking degree courses, who have not sufficient time unfortunately for this most desirable subject. Increased attention has been given to the subject of physical training during recent years. The Board has issued a model syllabus of physical exercises which has been revised from time to time in the light of experience, and has recently been reissued with changes and improvements. Students in training colleges are now required to go through a course which will qualify them to teach physical exercises in the schools, and two women inspectors for this subject have recently been appointed to visit women's and men's colleges respectively, the whole subject being supervised by the medical department of the Board. The greater attention which is now being given to hygiene and physical training, and which will, it is hoped, be given in the future to manual training, should do much to increase the practical efficiency of the teaching given in the elementary schools. The Board regrets that it is not at present possible to require these three subjects to be included in the course of students taking degree courses, owing to the insufficient time at its disposal, but it hopes that this difficulty may be surmounted in future. In August of 1909 the Board held a course of instruction in hygiene, including physical exercises, for members of the staffs of Training Colleges for Elementary School Teachers. The course lasted three weeks and was intended to explain and illustrate the syllabus of hygiene and the revised syllabus of physical exercises. Lectures on hygiene were delivered by Dr. H. R. Kenwood, Chadwick Professor of Hygiene in University College, London, who also took the students on expeditions to study on the spot modern methods of sanitation and ventilation in public elementary schools. The instruction in physical exercises was undertaken by Lieutenant Grenfell, and Miss Koetter, formerly one of the teachers of physical exercises under the London County Council. Lectures and practical instruction in the exercises were given. Games and dancing steps were also taught. The London County Council kindly placed the premises of the London Holborn Day Training College at the disposal of the Board for the course, which was attended by 15 men and 39 women, the great majority of whom had had practical experience as teachers of one or other of the subjects. Great interest and keenness were displayed, and there is every reason to hope that the course proved of practical value and assistance to those who attended it.

THE PETROL REBATE.

To the Editor of THE LANCET.

SIR,—On Feb. 26th last the *Autocar* told "doctors ..... how to obtain the full rebate," and on its advice I wrote to the local officer of Customs and Excise for form No. 232 B, and sent in my claim, which is still in the hands of the authorities, but I am led to understand that it will be paid when I have furnished the officer with: (1) details of petrol purchased by me; with (2) a verification of this quantity by the garage that supplied me; and (3) a certificate from their manufacturers that said petrol had paid the full duty. A simpler procedure could easily have been devised, but as things are I would advise "R. S. T." to do as I have done and then "wait and see."

I am, Sir, yours faithfully,

Grange-over-Sands, April 25th, 1910. WILLIAM A. FOX.

THE ALLEGED DANGERS OF THE DAILY "TUB."

A RECENT number of the Spanish magazine *Alrededor del Mundo* (*Around the World*) contained an article decidedly unfavourable to the use of the daily "tub," and an English correspondent residing in Spain has sent us the paragraph in question. Without expressing any opinion of its own, either for or against the "tub," our contemporary professes only to put before its readers the denunciations of "el baño ó el 'tub' diario" which have proceeded from two Englishmen. These gentlemen are represented as objecting strongly to the free use of soap in a bath; they consider that daily bathing is injurious to the epidermis, increases individual susceptibility to atmospheric changes, and is peculiarly harmful to children. Possibly the Spanish journalist may have made a skilful combination of selected quotations with an eye to heightening the effect of his paragraph, but whether this be so or not it seems clear that the case against the tub is overstated. We think that a bather after a cold bath who on drying himself feels a sensation of warmth and comfort will be the better for his bath and not the worse; while, on the other hand, any tendency to subsequent shivering or uneasiness is a contra-indication. This is the usual medical view, and we have not heard it challenged; of course, special pathological states are not taken into account. Warm baths are necessary to cleanliness, and their frequency should depend upon the occupation followed.

A MENSTRUAL PUZZLE.

To the Editor of THE LANCET.

SIR,—In submitting the following case for suggestions I must say I have often derived a hint from similar cases, and I might almost suggest having a separate column for such puzzling cases and their treatment. My case is that of a young single woman, otherwise in perfect health, who at each menstrual period has a typical "bilious" attack. The day before the menses appear she is quite prostrated with headache and squeamishness, which almost always ends in frequent retching and vomiting of bile. There is no uterine or pelvic pain and the flow is not particularly strong, lasting about three days. She has had hot hip-baths, hot douches, blue pill, or calomel on the day antecedent to the expected attack, but nothing seems to help. Sedatives, bromides, camphor, all the same. She is otherwise a healthy, strong girl, playing tennis and hockey well. I should be glad of any hints as to treatment.

I am, Sir, yours faithfully,

JOHN A. GRAHAM, M.B. Glasg.

Bethulie, South Africa, April 2nd, 1910.

A DIAGNOSTIC POINT.

WE have received a communication from Mr. G. Sherman Bigg drawing attention to a matter in clinical examination which he deems of importance. He commences by laying stress on the necessity of differentiating between functional and organic disease, especially with a view to "radical treatment." He states that "when the two radial pulses differ in strength from one another, and also differ in strength from the force of the heart's apex beat," the existence of structural change may with confidence be diagnosed. He further says that this evidence is of positive but not necessarily of negative value, for if this sign is present "there is structural change, though

structural change may exist without it." Mr. Bigg's statement is difficult to follow, as the term "structural change" is rather vague; he adds, however, that this phenomenon for the most part has been noticed in digestive disorders, but it has also been evident in connexion with structural change in other organs. Mr. Bigg omits to mention a fallacy that might easily render this observation less definite than his statement would indicate—namely, that it is not an uncommon occurrence for the radial arteries to differ in size this might give rise to the impression that they differ in strength. Mr. Bigg's suggestion, however, can be readily tested and its exact value estimated by other practitioners.

CRIME AND THE MEDICAL MAN.

To the Editor of THE LANCET.

SIR,—I am called by a stranger to go to a certain address. I go, and find a woman with a knife in her back, alone. She recovers. She tells me she knows who stabbed her, but refuses the name. Have I any obligation in the matter as regards informing the police? If so, what?

I am, Sir, yours faithfully,

April 22nd, 1910. INQUIRER.

*** There is no obligation upon our correspondent in the circumstances mentioned to give information.—ED. L.

THE GRATUITOUS MEDICAL CERTIFICATE.

A CORRESPONDENT has raised an old question by pointing out that a certain life insurance company, which is not, we understand, alone in its practice, refuses to accept the direct certificate of death from the medical man, but demands the registrar's certificate, which is a copy of the medical man's certificate. The point has been raised before and we fear that we have no suggestion of remedy to offer in the existing state of the law.

BRUSSELS INTERNATIONAL EXHIBITION.

IN connexion with the Brussels Exhibition, which was opened on April 23rd, the Great Eastern Railway Company has arranged to issue cheap return tickets, 1st class 38*s.* 6*d.*, 2nd class 24*s.*, available for 14 days, *vid* Harwich and Antwerp.

A. B. C.—In answer to the question about eligibility for active service abroad of a Territorial officer myopic in one eye, but wearing a correcting lens, the officer might be eligible; but it depends on the degree of myopia, and on whether it can be corrected. A Territorial officer could get a commission in the Regular Army, even if he can only read D = 24 with each eye at 6 metres (20 feet), provided he can correct it with glasses so as to be able to read D = 6 with one eye and D = 12 with the other at 6 metres; and also be able to read D = 0·8 with each eye without glasses at any distance he likes. Further, if *one* eye is so short-sighted that he can only read D = 36, he would be eligible provided he can read D = 6 with the other eye and can read D = 12 with the myopic eye by the aid of glasses. If he *cannot* read D = 24 at 6 metres with each eye without glasses he is *unfit*; but this is a high degree of myopia, only one-quarter of normal vision. The point in this particular case is, Can he read D = 6 with his good eye, and can he read D = 12, *with a glass*, with his bad eye? If so, he would be eligible for a commission in the Regular Army and *a fortiori* for active service as a Territorial. He would also have to read D = 0·8 without glasses at any distance, but this is no serious test for a myopic man. The whole point of recent modifications in eye tests in the army (1909) has been to make the regulations easy for *simple* myopia, only excluding *diseased* conditions.

L.R.C.P.I.—The gentleman about whom our correspondent inquires is an M.B. The words "Examiner in the Faculty of Medicine" mean that the person in question examines or used to examine in medicine. Faculty is the technical term for a body of teachers of one subject, and is also applied to the subject itself. There are three "superior faculties"—namely, Divinity, Law, and Physic.

Mr. Wm. Boothman must consult his usual medical attendant. It is quite possible that he is right in his feeling of plethora.

Law.—We have no information as to the matter referred to by our correspondent.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 27th, 1910.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
April 21	30·09	W.	...	95	65	52	54	57	Overcast
,, 22	29·97	W.	0·17	99	59	49	49	50	Raining
,, 23	30·03	S.W.	0·04	75	55	39	38	41	Cloudy
,, 24	29·40	W.	0·04	96	54	41	45	48	Cloudy
,, 25	29·42	W.	0·01	107	56	41	43	47	Cloudy
,, 26	29·60	W.	0·05	108	54	40	41	43	Cloudy
,, 27	30·06	W.	0·10	107	56	39	43	47	Fine

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY OF MEDICINE, 20, Hanover-square, W.

TUESDAY.

THERAPEUTICAL AND PHARMACOLOGICAL SECTION (Hon. Secretaries—J. Gray Duncanson, H. Charles Cameron) at 15, Cavendish-square, W.: at 4.30 P.M.

Annual General Meeting.

Papers:

Dr. C. Bolton: Some Points in the Treatment of Gastric Ulcer.

Dr. Langdon Brown: An Inquiry into the Value of Rectal Feeding.

FRIDAY.

LARYNGOLOGICAL SECTION (Hon. Secretaries—George C. Cathcart, L. Hemington Pegler) at 11, Chandos-street, W: at 5 P.M.

Cases:

Cases will be shown by Dr. Dundas Grant, Mr. Herbert Tilley, Mr. A. R. Tweedie, Dr. Watson Williams, Dr. G. C. Cathcart.

SATURDAY.

OTOLOGICAL SECTION (Hon. Secretaries—Hunter F. Tod, H. J. Marriage) at 11, Chandos-street, W.: at 10 A.M.

Cases and Specimens:

Dr. Wyatt Wingrave: Notes on the Pathology of Cholesteatoma.

Mr. A. L. Whitehead: Notes of a Case of Temporo-sphenoidal Abscess in which Vomiting was entirely Absent.

Dr. P. H. Abercrombie and Dr. Dan McKenzie: Hysterical Deafness with Active Vestibular Reactions.

Dr. H. J. Davis: Deformity of Both Pinnæ resulting from Perichondritis following Double Mastoid Operation.

Mr. Hunter Tod: (1) Exostosis of Right External Meatus in a Boy; (2) A Case in which the Clinical Symptoms Simulated a Cerebellar Abscess—Brain Explored on Two Occasions—No Abscess Discovered—Recovery; (3) Specimen of Cholesteatoma or Keratosis Obturans of the External Auditory Canal.

Mr. George Wilkinson: Two Cases of Cholesteatoma of Unusual Size Extending into the Posterior Fossa and Causing Obliteration of the Sigmoid Sinus.

Dr. P. Watson Williams: Myelogenous Sarcoma of the Right Temporal Bone with Extension through the External Meatus, Resembling an Aural Polypus.

Mr. G. J. Jenkins: Fracture of the Temporal Bone.

COAL SMOKE ABATEMENT SOCIETY, Royal United Service Institution.

WEDNESDAY.—3 P.M., Meeting.

NORTH-EAST LONDON CLINICAL SOCIETY, Prince of Wales's Hospital, Tottenham, N.

THURSDAY.—4.15 P.M., Clinical Cases.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM, 11, Chandos-street, Cavendish-square, W.

THURSDAY.—8 P.M., Card Cases by Mr. H. Herbert, Dr. A. S. Worton, Mr. J. H. Tomlinson, and others. 8.30 P.M., Mr. H. Herbert: A New Operation for Glaucoma.—Dr. J. H. Fisher: Congenital Word-Blindness.—Dr. A. Bronner: Some Cases of Hypopyon Keratitis Treated with Pyocyanese.—Dr. E. Clarke: Optic Atrophy Following the Use of Orsudan and Soamin.

RONTGEN SOCIETY, 20, Hanover-square, W.

THURSDAY.—8.15 P.M., Mr. J. H. Gardiner: Quantitative Measurements of the Conversion of Kathode Rays into Röntgen Rays by Antikathodes of Different Metals.

HARVEIAN SOCIETY OF LONDON, Paddington Infirmary.

THURSDAY.—8.30 P.M., Clinical Evening.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies-street, W.C.

MONDAY.—4 P.M., Dr. G. Little: Clinique (Skin). 5.15 P.M., Lecture:—Dr. F. M. Sandwith: Malta Fever.

TUESDAY.—4 P.M., Dr. T. N. Kelynack: Clinique (Medical). 5.15 P.M., Lecture:—Mr. M. Davidson: Localisation by Means of X Rays.

WEDNESDAY.—4 P.M., Mr. D. C. L. Fitzwilliams: Clinique (Surgical). 5.15 P.M., Lecture:—Mr. E. Clarke: Optic Atrophy (with lantern slides).

THURSDAY.—4 P.M., Sir Jonathan Hutchinson: Museum Demonstration. 5.15 P.M., Lecture:—Dr. StClair Thomson: The Operation of Laryngo-Fissure and its Indications.

FRIDAY.—4 P.M., Mr. J. G. French: Clinique (Ear, Nose, and Throat).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY.—10 A.M., Lecture:—Surgical Registrar: Demonstration of Cases in Wards. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye.

TUESDAY.—10 A.M., Dr. Moullin: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Operations on the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin.

WEDNESDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. B. Harman: Diseases of the Eye. 2.30 P.M., Diseases of Women.

THURSDAY.—10 A.M., Lecture:—Surgical Registrar: Demonstration of Cases in Wards. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. Dunn: Diseases of the Eye.

FRIDAY.—10 A.M., Dr. Moullin: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin.

SATURDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Diseases of the Throat, Nose, and Ear. Mr. B. Harman: Diseases of the Eye. 2 P.M., Medical and Surgical Clinics. X Rays. Operations.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.

MONDAY.—2 P.M., Operations. 2.15 P.M., Mr. Turner: Surgery. 3.15 P.M., Sir Dyce Duckworth: Medicine. 4 P.M., Mr. R. Lake: Ear and Throat. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat.

TUESDAY.—2 P.M., Operations. 2.15 P.M., Dr. R. Wells: Medicine. 3.15 P.M., Mr. R. Carling: Surgery. 4 P.M., Sir M. Morris: Diseases of the Skin. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin.

WEDNESDAY.—2 P.M., Operations. 2.15 P.M., Dr. F. Taylor: Medicine. 3.30 P.M., Mr. Cargill: Ophthalmology. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye. 3.30 P.M., Special Lecture:—Mr. Cargill: Sympathetic Ophthalmitis.

THURSDAY.—2 P.M., Operations. 2.15 P.M., Dr. G. Rankin: Medicine. 3.15 P.M., Sir W. Bennett: Surgery. 4 P.M., Dr. Sale-Barker: Radiography. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat. 2.30 P.M., Special Lecture:—Dr. G. Rankin: Duodenal Ulcer.

FRIDAY.—2 P.M., Operations. 2.15 P.M., Dr. R. Bradford: Medicine. 3.15 P.M., Mr. McGavin: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin. 2.15 P.M., Special Lecture:—Dr. R. Bradford: Angina.

SATURDAY.—2 P.M., Operations. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.

WEDNESDAY.—4 P.M., Lecture:—Dr. D. Grant: Lesions Simulating Laryngeal Tuberculosis.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn-road, W.C.

TUESDAY.—3.45 P.M., Lecture:—Dr. Atkinson: Nose.
FRIDAY.—Dr. D. McKenzie: Labyrinth.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (2nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.), Central London Throat and Ear (Minor 9 A.M., Major 2 P.M.),

TUESDAY (3rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M., Ophthalmic, 2 P.M.), Tottenham (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

WEDNESDAY (4th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Royal Orthopædic (3 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

THURSDAY (5th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Orthopædic (9 A.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (Gynæcological, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

FRIDAY (6th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

SATURDAY (7th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 A.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M.), West London (2.30 P.M.).

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